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Ontario - Legislative Assembly

SESSIONAL PAPERS

VOL. LIII.—PART VIII

SECOND SESSION

OF THE

FIFTEENTH LEGISLATURE

OF THE

PROVINCE OF ONTARIO

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SESSION 1921

TORONTO:
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1922

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LIST OF SESSIONAL PAPERS

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Bee-Keepers Association, Report	37	*Printed.*
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Convictions under Temperance Act	84	*Not Printed.*
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Goals, Prisons and Reformatories, Report	26	*Printed.*
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LIST OF SESSIONAL PAPERS

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No. 1 Public Accounts of the Province for the year ending 31st October, 1920. Presented to the Legislature, 11th February, 1921. *Printed.*

No. 2 Estimates—Supplementary for the service of the Province for the year ending 31st October, 1921. Presented to the Legislature, 15th February, 1921. *Printed.* Further supplementary estimates presented to the Legislature 15th April, 1921. *Printed.* Estimates for the year ending October 31st, 1922. Presented to the Legislature, 21st April, 1921. *Printed.*

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No. 3 Report of the Minister of Lands and Forests for the year 1920. Presented to the Legislature, 29th April, 1921. *Printed.*

No. 4 Report of the Department of Mines for the year 1920. Presented to the Legislature, 21st March, 1921. *Printed.*

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No. 5 Report of the Inspector of Division Courts for the year 1920. Presented to the Legislature, 7th February, 1921. *Printed.*

No. 6 Report of the Inspector of Legal Offices for the year 1920. Presented to the Legislature, 21st March, 1921. *Printed.*

No. 7 Report of the Inspector of Registry Offices for the year 1920. Presented to the Legislature, 21st March, 1921. *Printed.*

No. 8 Report of the Provincial Municipal Auditor for the year 1920. Presented to the Legislature, 15th February, 1921. *Printed.*

No. 9 Report of the Commissioners for the Queen Victoria Niagara Falls Park for the year 1920. Presented to the Legislature, 29th April, 1921. *Printed.*

No. 10 Report of Superintendent of Insurance for the year 1920. Presented to the Legislature, 15th February, 1921. *Printed.*

No. 11 Report of the Registrar of Friendly Societies for the year 1920. Presented to the Legislature, 15th February, 1921. *Printed.*

No. 12 Loan and Trust Corporations' statement being abstracts from financial statements made by building societies, loan companies, loaning land companies and trust companies for the year ended Decem-31st, 1919. Presented to the Legislature, 1st February, 1921. *Printed.*

Report of the Registrar of Loan Corporations for the year 1920. Presented to the Legislature, 15th February, 1921. *Printed.*

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No. 13 Report of the Minister of Public Works for the year 1920. Presented to the Legislature, 15th February, 1921. *Printed.*

No. 14 Report of the Game and Fisheries Department for the year 1920. Presented to the Legislature, 7th March, 1921. *Printed.*

No. 15 Report of the Department of Public Highways for the year 1920. Presented to the Legislature, 28th April, 1921. *Printed.*

No. 16 Report of the Department of Labour for the year 1920. Presented to the Legislature, 29th April, 1921. *Printed.*

No. 17 Report of the Minister of Education for the year 1920. Presented to the Legislature, 13th April, 1921. *Printed.*

No. 18 Report of the Board of Governors of the University of Toronto for the year ending 30th June, 1920. Presented to the Legislature, 2nd February, 1921. *Printed.*

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No. 19 Report of the Secretary and Registrar of the Province for the year 1920. Presented to the Legislature, 28th April, 1921. *Printed.*

No. 20 Report of the Registrar-General relating to the Registration of Births, Marriages and Deaths for the year ending 1920. Presented to the Legislature, 1st March, 1921. *Printed.*

No. 21 Report of the Provincial Board of Health for the year 1920. Presented to the Legislature, 11th February, 1921. *Printed.*

No. 22 Report of the Inspector of Prisons and Public Charities upon the Ontario Hospitals for the Insane for the year 1920. Presented to the Legislature, 13th April, 1921. *Printed.*

No. 23 No Report.

No. 24 No Report.

No. 25 Report upon the hospitals and charitable institutions for the year 1920. Presented to the Legislature, 29th April, 1921. *Printed.*

No. 26 Report upon the prisons and reformatories for the year 1920. Presented to the Legislature, 13th April, 1921. *Printed.*

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No. 27 Report upon the neglected and dependent children for the year 1920. Presented to the Legislature, 29th April, 1921. *Not Printed.*

No. 28 Report upon the operation of the Ontario Temperance Act for the year 1920. Presented to the Legislature, 14th February, 1921. *Printed. Part 6, 1920, Sess. Vol.*

No. 29 Report of the Minister of Agriculture for the year 1920. Presented to the Legislature, 22nd April, 1921. *Printed.*

No. 30 Report of the Ontario Agricultural College and Experimental Farm. for the year 1920. Presented to the Legislature, 22nd April, 1921. *Printed.*

No. 31 No Report.

No. 32 Report of the Agricultural and Experimental Union for the year 1920. Presented to the Legislature, 27th April, 1921. *Printed.*

No. 33 Report of the Stallion Enrolment Board for the year 1920. Presented to the Legislature, 1st February, 1921. *Printed.*

No. 34 Report of the Vegetable Growers' Association for the year 1920. Presented to the Legislature, 27th April, 1921. *Printed.*

No. 35 No Report.

No. 36 Report of the Entomological Society for the year 1920. Presented to the Legislature, 22nd April, 1921. *Printed.*

No. 37 Report of the Beekeepers' Association for the year 1920. Presented to the Legislature, 22nd April, 1921. *Printed.*

No. 38 Report of the Dairymen's Associations for the year 1920. Presented to the Legislature, 22nd April, 1921. *Printed.*

No. 39 Report of the Live Stock Branch for the year 1920. Presented to the Legislature, 22nd April, 1921. *Printed.*

No. 40 Report *re* Housing of the Bureau of Municipal Affairs for the year 1920. Presented to the Legislature, 29th April, 1921. *Printed.*

No. 41 Report of the Women's Institutes for the year 1920. Presented to the Legislature, 22nd April, 1921. *Printed.*

No. 42 Report of the Agricultural Societies and the Convention of the Ontario Associations and Exhibitions for the year 1920. Presented to the Legislature, 16th February, 1921. *Printed.*

No. 43 Report of the Horticultural Societies for the year 1920. Presented to the Legislature, 27th April, 1921. *Printed.*

No. 44 Report of Fruit Growers' Association for the year 1920. Presented to the Legislature, 22nd April, 1921. *Printed.*

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No. 45 No Report.

No. 46 Report of the Statistics Branch of the Department of Agriculture for the year 1920. Presented to the Legislature, 22nd April, 1921. *Printed.*

No. 47 Report of Bureau of Municipal Affairs for the year 1920. Presented to the Legislature, 11th February, 1921. *Printed.*

No. 48 Report of the Temiskaming and Northern Ontario Railway for the year 1920. Presented to the Legislature, 10th March, 1921. *Printed.*

No. 49 Report of the Hydro-Electric Power Commission for the year 1920. Presented to the Legislature, 4th April, 1921.

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No. 50 Report of The Ontario Railway and Municipal Board for the year 1920. Presented to the Legislature, 21st March, 1921. *Printed.*

No. 51 A Return from the Records of the By-Elections to the Legislative Assembly held on the 19th day of July and the 8th day of November, 1920, shewing:—

(1) The number of Votes Polled for each Candidate in each Electoral District in which there was a contest; (2) The majority whereby each successful Candidate was returned; (3) The total number of Votes Polled; (4) The number of Votes remaining unpolled; (5) The number of names on the Polling Lists; (6) The number of Ballot Papers sent out to each Polling Place; (7) The Used Ballot Papers; (8) The Unused Ballot Papers; (9) The Rejected Ballot Papers; (10) The Cancelled Ballot Papers; (11) The Declined Ballot Papers; (12) The Ballot Papers taken from Polling Places; (13) A General Summary of Votes cast in each Electoral District. Presented to the Legislature, 25th January, 1921. *Printed.*

No. 52	Report of the Bureau of Archives for the Province of Ontario, 1920. Presented to the Legislature, 15th April, 1921. *Printed.*
	—Supplement to Report of the Bureau of Archives, 1920. Presented to the Legislature, 27th April, 1921. *Printed.*
No. 53	The Report of the Librarian on the state of the Library. Presented to the Legislature, 26th January, 1921. *Not Printed.*
No. 54	Auditor's Report for the year 1919-20. Presented to the Legislature, 8th March, 1921. *Printed.*
No. 55	Report of the Workmen's Compensation Board for 1920. Presented to the Legislature, 28th April, 1921. *Printed.*
No. 56	Report on the Administration of Criminal Justice and Treatment of Prisoners in New York, Chicago, Detroit and Toronto, by His Honour Judge Coatsworth, Senior Judge of the County of York, Province of Ontario. Presented to the Legislature, 5th April, 1921. *Printed.*
No. 57	Report of the Ontario Board of Parole for the year ending 31st October, 1920. Presented to the Legislature, 21st February, 1921. *Printed.*
No. 58	Report of the Committee on Rural Credits. Presented to the Legislature, 11th February, 1921. *Printed.*
No. 59	Report of the Select Committee of the Legislative Assembly, as to a more equitable system of distribution of Hydro-Electric power and a more uniform price. Presented to the Legislature, 26th January, 1921. *Printed.*
No. 60	Statement of the distribution of the Revised and Sessional Statutes for the year 1920. Presented to the Legislature, 1st February, 1921. *Not Printed.*
No. 61	Regulations and Orders-in-Council passed since the last Session of the Legislature under the authority of the Department of Education Act, or of the Public Schools, Separate Schools or High Schools. Presented to the Legislature, 1st February, 2nd February, 14th February, 7th March, 21st March, 13th April, 1921. *Not Printed.*
No. 62	Interim Report *re* Issuers of Marriage Licenses, Public Service Commission. Presented to the Legislature, 11th February, 1921. *Printed.*
No. 63	Interim Report of the Public Service Commission *re* Police Magistrates. Presented to the Legislature, 11th February, 1921. *Printed.*

No. 64 The Minister of Lands and Forests presented to the House, a Return to an Order of the House showing 1. How many Timber Limits have been offered for sale since 1st December, 1919, and where situated. 2. Were they all sold by tender. 3. The date of sale, area, and price paid. 4. Were any withdrawn after being advertised, and if so, why. 5. How many tenders were received in each case. 6. The name of the successful tenderer. 7. The amount of bond given in each case by the successful tenderer. Presented to the Legislature, 16th February, 1921. Mr. *Tolmie*. *Not Printed.*

No. 65 Report of the Commission to enquire into and report upon a basis for determining the financial obligations of the Province toward the University of Toronto, and the financial aid which the Province may give to Queen's University of Kingston and the Western University of London, etc., etc. Presented to the Legislature, 21st February, 1921. *Printed.*

No. 66 Return to an Order of the House of the 14th day of February for a Return showing dates when tenders called for, the tenders received and the names of tenderers for the production of (*a*) Ontario Public School Readers, each respectively; (*b*) Ontario Public School Histories, each respectively; (c) Ontario High School History; (*d*) Ontario Composition and Grammar. Presented to the Legislature, 21st February, 1921. Mr. *Sinclair*. *Not Printed.*

No. 67 Interim Reports (First, Second and Third) of the Commission to investigate and report upon the accuracy or otherwise of all returns made pursuant to The Crown Timber Act, sec. 14, by any holder of a Timber License, etc., etc., etc. Presented to the Legislature, 23rd February, 1921. *Printed.*

No. 68 Return to an Order of the House of the 23rd February, 1921, for a Return of copies of all correspondence between the Minister of Lands and Forests, the Prime Minister, or any Minister of the Government and any official, representative or solicitor on behalf of the Spruce Falls Pulp & Paper Co., together with all estimates, reports, conditions of sale, maps, documents and papers of every kind and nature, relating to (1) The sale of the Kapuskasing Soldiers' and Sailors' Settlement Colony; (2) The additional area acquired by the Company to add to the concession known as the Kapuskasing Pulp Concession; (3) Relating to the establishment of the Government Town Site at Kapuskasing. Presented to the Legislature, 24th February, 1921. Mr. *Magladery*. *Not Printed.*

No. 69 Annual Report of the Soldiers' Aid Commission of Ontario for year ending 31st October, 1919. Presented to the Legislature, 1st March, 1921. *Not Printed.*

No. 69 Report of Soldiers' Aid Commission for the year 1920. Presented to the Legislature, 21st March, 1921.

No. 70 Return to an Order of the House of 23rd February, 1921, that there be laid before the House, a Return showing the number of Issuers of Marriage Licences in the Province of Ontario, with their names and addresses and the date of their appointment. Presented to the Legislature, 1st March, 1921. Mr. *Ross,* Kingston. *Not Printed.*

No. 71 Return to an Order of the House of 9th February, 1921, that there be laid before the House a Return of copies of all correspondence, papers and documents since 13th November, 1919, relating to conduct or duties of Magistrates, Justices of the Peace and other officers with reference to enforcement of The Ontario Temperance Act. Presented to the Legislature, 1st March, 1921. Mr. *Hill. Not Printed.*

No. 72 Return to an Order of the House of 23rd February, 1921, that there be laid before the House a Return of copies of the Report of the Superintendent of Provincial Police to the Attorney-General for the years 1918, 1919 and 1920. Presented to the Legislature, 1st March, 1921. Mr. *Godfrey. Not Printed.*

No. 73 Return to an Order of the House of 23rd February, 1921, for a Return showing copy of Agreement between Provincial Board of Health and Federal Health Department relating to prevention of Venereal Diseases. 2. What amount has already been received by the Province to date. Presented to the Legislature, 4th March, 1921. Mr. *Price. Not Printed.*

No. 74 Return to an Order of the House of 4th February, 1921, for a Return of copies of all correspondence passing between the Government of Ontario or any member, officer or official thereof, or of any department thereof and any member of the House or other person leading up to it, and dealing with the suspension and resignation of Messrs. Smith and Hanna from the Provincial Police. Presented to the Legislature, 4th March, 1921. Mr. *Tolmie. Not Printed.*

No. 75 Return to an Order of the House of the 4th February, 1921, for a Return of copies of all correspondence with and by the Government or any department thereof leading up to and relating to the dismissal of Mr. Lewis R. Luke as License Inspector for Ontario County. Presented to the Legislature, 4th March, 1921. Mr. *Sinclair. Not Printed.*

No. 76 Statement and Report of the Ontario Athletic Commission and of Auditor for the year 1920. Presented to the Legislature, 4th March, 1921. *Not Printed.*

No. 77 Report of the Commission upon the rates of wages paid to men employed by The Hydro-Electric Power Commission in the construction of the Queenston-Chippewa Development. Presented to the Legislature, 4th March, 1921. *Printed.*

No. 78 Return to an Order of the House of 28th February, 1921, that there be laid before the House a Return of copies of all letters, reports and communications of every kind received by the Minister of Mines or any member of the Government with respect to the proposed increase in mining taxes. Presented to the Legislature, 9th March, 1921. Mr. *Ferguson. Not Printed.*

No. 79 Return to an Order of the House of 23rd February, 1921, for a Return of copies of all correspondence between the Government or any member or any Minister or official and the Canada Copper Company (International Nickel Company) and George E. Buchanan relating to leases or grants of nickel-bearing or other mineral lands in the Township of Creighton, District of Sudbury, since 13th November, 1919. Presented to the Legislature, 10th March, 1921. Mr. *Dewart. Not Printed.*

No. 80 Interim report respecting Coroners of the Commission to inquire, consider and report upon the best mode of selecting, appointing and remunerating Sheriffs, etc., etc. Presented to the Legislature, 18th March, 1921. *Printed.*

No. 81 Report of the Committee on Proportional Representation. Presented to the Legislature, 5th April, 1921. *Printed.*

No. 82 Return to an Order of 16th February, 1921, that there be laid before the House a Return showing what are the amounts paid by each Company respectively which make up the total credited to The Mining Tax Act in the Public Accounts for 1920 at page *a*31 under the heading: (*a*) Acreage tax, $71,223.26; (*b*) Profits tax, $713,291.46. Presented to the Legislature, 21st March, 1921. Mr. *McAlpine. Not Printed.*

No. 83 Return to an Order of the House, of 9th February, 1921, that there be laid before the House a Return showing:—1. What was the total quantity of fish caught in Lake Nipissing and Lake Nipigon, respectively, and marketed in the following years—1917, 1918, 1919 and 1920. 2. What were the varieties of fish caught and marketed in Lake Nipissing and Lake Nipigon respectively, and the quantity of each. 3. What was the price paid to fishermen for each variety; what was the price at which the Government sold each variety; to whom were such sales made. 4. To whom were licenses issued to take fish from Lake Nipissing and Lake Nipigon respectively, in the years 1917, 1918, 1919 and 1920. 5. Is it the intention of the Government to continue this Fishery Department as a commercial enterprise. 6. What were the gross receipts from fish sales in Lake Nipissing and Lake Nipigon in the years 1917, 1918, 1919 and 1920, and what were the net profits of the Government in each of said years. Presented to the Legislature, 1st April, 1921. Mr. *Mageau*. *Not Printed.*

No. 84 Return to an Order of 23rd February, 1921, that there be laid before the House a Return showing the number of convictions made under The Ontario Temperance Act for breaches of the said Act for year 1919-20: 1. At the instance of officers of the Board of License Commissioners. 2. At the instance of officers of the Ontario Provincial Police. 3. At the instance of Municipal Police officers. 4. The number of cases in which fines or sentences have been remitted, reduced, or commuted: (1) Upon the recommendation of the Board of License Commissioners; (2) Without the recommendation of the Board of License Commissioners. Presented to the Legislature, 13th April, 1921. Mr. *Godfrey*. *Not Printed.*

No. 85 Copy of Report of R. D. Johnson *et al* on the Queenston-Chippawa Power Development, with statement of professional record of H. S. Kerbaugh and Francis Lee Stuart, with letters. Presented to the Legislature, 13th April, 1921. *Printed.*

No. 86 Report of R. S. Lea, Consulting Engineer of Progress on Queenston-Chippawa Power Development, 31st January to 9th April, 1921. Presented to the Legislature, 13th April, 1921. *Printed.*

No. 87 Report of the Civil Service Commissioner for Ontario, 1920. Presented to the Legislature, 15th April, 1921. *Printed.*

No. 88 First Annual Report of The Mothers' Allowances Commission for the year 1920. Presented to the Legislature, 20th April, 1921. *Printed.*

No. 89 Final Report of Hugh L. Cooper & Co. *re* Queenston-Chippawa Development of the Hydro-Electric Power Commission of Ontario. Presented to the Legislature, 21st April, 1921. *Printed.*

No. 90 Return to an Order of the House of the 25th February, 1921, that there be laid before this House a Return showing:—1. How many miles are included in the Ottawa-Prescott Highway. 2. How many miles of this Highway were completely graded at the end of the year 1920. 3. How much grading still remains to be done. 4. What was the average cost *per* mile of the grading completed. 5. What amount was spent during the year 1920 on equipment for the Ottawa-Prescott Highway. 6. How many men were employed in each of the months of 1920. 7. Has the Government purchased any gravel pits or stone quarries along or in the vicinity of the right-of-way of the Ottawa-Prescott Highway, and if so (*a*) From whom; (*b*) What was paid for each; and (*c*) What was the area of each. 8. Has the Government rented any gravel pits or stone quarries along or in the vicinity of the right-of-way of the Ottawa-Prescott Highway, and if so (*a*) From whom; (*b*) What was paid for each; and (*c*) What was the area of each. 9. Did the Government purchase any gravel or stone for the right-of-way of the Ottawa-Prescott Highway, and if so (*a*) From whom; (*b*) What was paid per cubic yard; and (*c*) What was the total amount paid each man. 10. How many culverts were built during the year 1920. 11. How many still remain to be completed. 12. How many culverts were built (*a*) By day labour; (*b*) By contract. 13. If any were built by the latter (*a*) Who were the contractors; (*b*) What were the unit prices paid; (*c*) What lump sums were paid to each contractor. 14. What was the cost *per* cubic yard of the said culverts in place built by day labour. 15. What was the cost *per* cubic yard of the said culverts in place built by contract. 16. What was the total amount spent on the Ottawa-Prescott Highway to 31st December, 1920. 17. Have the plans of the said Highway been filed in the Federal Department of Railways pursuant to the Canada Highways Act, and if so, when. 18. Has a subsidy agreement been signed with the Dominion Government pursuant to the Canada Highways Act. 19. If so, what is the date of the agreement. 20. Has the Government received any payments on account of Dominion Government subsidy, and if so, the dates and amounts of the payments. 21. What wages were paid during 1920, on the Ottawa-Prescott Highway (*a*) For unskilled labour; (*b*) For teams with driver. 22. How many hours a day did the men employed on the road during 1920 work. 23. Who was the engineer in charge of the road during 1920, and what was his salary. 24. Has the Government settled with all the parties from whom the right-of-way was acquired. 25. If the answer to 24 is in the negative, what parties still remain to be settled with. Presented to the Legislature, 28th April, 1921. Mr. *Hill. Not Printed.*

No. 91 Return to an Order of 4th March, 1921, that there be laid before this House a Return showing:—1. What places in the City of Toronto are employed for Government use outside the Legislative Building. 2. For what Department, Commission or Board are they being used. 3. What are the terms of rental or lease. 4. How much has been expended on improvements on each place to date. 5. On what dates was possession taken under the different leases. 6. How many employees are at work in each of the respective buildings so leased. Presented to the Legislature, 29th April, 1921. Mr. *Ross,* Kingston. *Not Printed.*

No. 92 Return to an Order of 21st February, 1921, that there be laid before this House a Return of copies of all papers and correspondence between the Government or any member thereof or any official on behalf of the Government and any other Corporation or person relating to: (*a*) Loan "R.R." sold to syndicate composed of the Dominion Securities and others: (*b*) Loan for $16,000,000 at 6 *per cent.,* repayable in fifteen years for which the price of 92.34 was realized; (*c*) The loan "S.S." sold to the syndicate composed of Aemilius Jarvis and others; (*d*) The loan for $10,000,000 at 6 *per cent.,* repayable in twenty years for which the price of 96.787 was realized. Presented to the Legislature, 29th April, 1921. Mr. *Hay.* *Not Printed.*

No. 93 Copies of Orders-in-Council designating, pursuant to section 14 of The Hospitals and Charitable Institutions Act, Hospitals, Refuges, Orphanages and Infants' Homes, to which aid be granted. Presented to the Legislature, 29th April, 1921. *Not Printed.*

No. 94 Report of the Commission to inquire into and report upon the truth or falsity of the charges made against David Hastings, Police Magistrate, Dunnville. Presented to the Legislature, 29th April, 1921. *Not Printed.*

FIFTEENTH ANNUAL REPORT

OF THE

ONTARIO RAILWAY

AND

MUNICIPAL BOARD

To December 31st, 1920

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO
Printed by Clarkson W. James, Printer to the King's Most Excellent Majesty
1921

Printed by
THE RYERSON PRESS

TO THE HONOURABLE LIONEL CLARKE,

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to transmit herewith the Fifteenth Report of The Ontario Railway and Municipal Board, for the year ending December 31st, 1920.

Respectfully submitted,

W. E. RANEY,
Attorney-General.

Parliament Buildings,
Toronto.

47 Queen's Park,
Toronto, March 17th, 1920.

Re Fifteenth Annual Report.

Dear Sir,—I have the honour to send you herewith the Fifteenth Report of The Ontario Railway and Municipal Board, to December 31st, 1920.

I have the honour to be,

Your obedient servant,

H. C. Small,
Secretary.

The Honourable, the Attorney-General,
Legislative Buildings, Toronto.

FIFTEENTH ANNUAL REPORT

OF THE

ONTARIO RAILWAY AND MUNICIPAL BOARD

to December 31st, 1920.

To the Honourable Lionel Clarke,
Lieutenant-Governor of the Province of Ontario in Council.

In pursuance of section 57 of "The Ontario Railway and Municipal Board Act." the Ontario Railway and Municipal Board beg leave respectfully to submit their Fifteenth Annual Report.

Sittings of the Board.

The Board held meetings for the transaction of routine business every juridical day throughout the year. The record of the sessions of the Board and an abstract of the proceedings, together with the Judgments or Opinions of the Board, appear in the Appendix.

Applications to the Board

There were 767 formal applications made to the Board in 1920. Of the formal application all those in which the parties were ready to go to trial have been heard and disposed of, except in a few cases where adjournments were granted to the parties at the request of Counsel or in order to procure further evidence, or to obtain Reports from Experts in connection with technical matters in question.

Some of the formal applications are still standing for trial, but the parties are not yet ready to go to trial, as in the more important matters the parties interested are showing an increasing disposition to take advantage of the opportunities afforded them by the Board's Rules for obtaining discovery and production, thus, to some extent, delaying the final dates at the hearings of the applications, but in reality facilitating the final disposition at the hearings of the matters in question between the parties..

Law Stamps.

The amount of revenue collected by the Board in Law Stamps in the year 1918 was $3,939.40; in 1919, $4,674 00; and $6,957.50 in 1920.

PROVINCIAL RAILWAYS.

An alphabetical list (under the names of the railway companies affected) of applications to the Board during 1920, affecting Provincial Railways, is contained in the Appendix to this Report.

Extensions of, and improvements to, Provincial Railways during 1920, as reported to the Board, will be found in the Appendix, arranged alphabetically under the names of the several systems reporting.

A tabulation (arranged alphabetically) of Railways under the Board's jurisdiction, will be found in the Appendix. This tabulation shows, for each Railway, the lengths of first and second main track, total main track, sidings and turnouts, and total computed as single track, the length under construction, the number of Power Houses and whether steam or water, and whence power obtained.

There will be found in the Appendix an analytical tabulated summary of Accident Reports received by the Board for 1920, also a continuation (up to and inclusive of 1920) of the Board's index to Railway Legislation

The Appendix also contains tables showing Provincial aid to Railways since Confederation.

In 1920 the Board effected settlement of strikes by employees of The London Street Railway Co. Records of these proceedings are contained in the Appendix. The Board is still operating the London Street Railway System.

REPORTS TO THE HOUSE.

In pursuance of Rule 61a of the House the Board has made enquiry into and reported upon 4 Financial Bills which were introduced last session into the Legislature. A list of the Bills so reported will be found in the Appendix.

ANNEXATIONS OF TERRITORY.

There were 11 applications made in 1920 by cities, towns, villages and town annexation applications is contained in the Appendix.

VALIDATION OF MUNICIPAL DEBENTURES.

(Section 295 of "The Municipal Act.")

There were 116 applications to the Board under the above legislation in 1920, involving debentures of a total value of $1,359,538.05. Acting under the powers conferred by the above legislation the Board was able to grant relief in nearly all of these cases, included in which were more than 50 By-laws affected by irregularities which would otherwise have probably required special Acts of the Legislature to make the debentures valid and saleable.

Municipalities are showing an increasing disposition to have their by-laws and debentures validated under said section 295, even in cases where no irregularities occur requiring the curative powers of the Board thereunder, as they have found that such vadidation facilitates the marketing of their debentures.

The amount of debentures validated by the Board during 1908 was over $840,000; during 1909, over $1,326,000; in 1910, over $718,000; in 1911, over $1,350,000; in 1912, over $1,330,000; in 1913, over $2,990,000; in 1914, over $3,071,000; in 1915, $4,172,912.01; in 1916, $2,289,744.20; $1,538,689.99 in 1917; $5,273,742.43 in 1918, and $2,209,589.99 in 1919—a total to the end of 1920 of over $31,463,000.00 An alphabetical list of these applications filed in 1920 is given in the Appendix and will be found indexed under the word "Validation."

ASSESSMENT APPEALS.

There were 10 assessment appeals to the Board during the year 1920. The assessed value of the property affected by these appeals was $3,418,855. An alphabetical list of these appeals is contained in the Appendix.

RAILWAY RETURNS.

Annual Reports to June 30th, 1920, by Railway Companies under the Board's jurisdiction, and a summarized tabulation thereof showing the details of their capital, assets, liabilities, operations, etc., will be found in the Appendix, alphabetically arranged. The reports are copied and tabulated as received and the Board has no means of auditing same and does not therefore represent or guarantee that such reports are correct or accurate.

ACCIDENTS

A tabulated summary of accident reports received by the Board from Provincial Railways during the year 1920 appears in the Appendix and shows that 16 persons were killed and 473 injured during the year.

In 1908, 26 persons were killed and 391 injured; in 1909, 16 were killed and 340 injured; in 1910, 34 were killed and 399 injured; in 1911, 33 were killed and 541 injured; in 1912, 25 were killed and 537 injured; in 1913, 13 were killed and 710 injured; in 1914, 12 were killed and 613 injured; in 1915, 30 were killed and 612 injured (this included 15 killed and 144 injured in accident at Queenston, July 7th, 1915,); 13 were killed and 356 injured in 1916; 27 fatal and 377 other personal accidents occurred in 1917; 22 persons were killed and 426 injured during 1918, and in 1919, 24 persons were killed and 507 injured.

ONTARIO SAFETY LEAGUE.

Early in 1913 the members of the Board called together representatives of various organizations which were specially interested in the question of street traffic. Representatives were sent from the Board of Trade, Canadian Manufacturers' Association, City Council, Ontario Motor League, Board of Education, Separate School Board, Toronto Railway Company, Toronto District Labour Council, Boy Scouts, Team Owners' Association, and many others. Every delegate realized that the question was one that dealt with actual dangers to which the public was constantly exposed, and each agreed that some definite and concerted action must be taken.. After numerous conferences the Ontario Safety League was organized on the 17th September, 1913. The League has since done much good and vitally useful work towards lessening the dangers of travel, especially on congested highways.

A summary of the League's 1920 campaign appears in the Appendix.

The League is now taking steps to become national in its organization and operations.

PLANS.

(Plans of Land Subdivisions.)

Under "The Planning and Development Act" (Chapter 38, 1918) the Board considered during the year 109 applications for approval of plans. An alphabetical list of owners of the lands subdivided by these plans will be found in the Appendix.

154 such applications were considered in 1912; 213 in 1913; 137 in 1914; 38 in 1915; 18 in 1916; 41 in 1917; 37 in 1918, and 49 in 1919.

An Act to amend "The Land Titles Act," being Chapter 31, Ontario Statutes, 1917, requires plans of lands in territories without municipal organization to be approved by the Board. Under this legislation, which became effective on the 12th April, 1917, the Board, during the balance of that year, received 4 applications, 5 in 1918, 2 in 1919 and 2 in 1920. An alphabetical list of the owners of the lands affected by the applications filed in 1920 will be found in the Appendix.

There were, during 1920, 16 applications for the approval of Deeds or Mortgages under section 11 of "The Planning and Development Act." By amendment (Section 3, Chapter 60, Ontario Statutes, 1920) effective August 4th, 1920, such Deeds, &c., do not now require the Board's approval, if approved by the Municipalities affected.

FORMS.

The Board has (for distribution to parties interested) the following forms and specifications, namely:—

(1) The Board's Rules of Practice, Specifications and Practice Forms.

(2) Standard Specifications for Bridges, Viaducts, Trestles or other Structures.

(3) Pamphlets containing copy of "The Ontario Telephone Act, 1918" and with information regarding Provincial Telephone Systems.

(4) Forms under "The Local Improvement Act."

(5) Specifications for Local Municipal Telephone Systems.

(6) Forms under "The Planning and Development Act."

(7) Forms for submission of a by-law or question to a poll under "The Municipal Act."

(8) Forms of affidavits in support of applications under section 295 of "The Municipal Act."

(9) Form for Return by Municipality operating Telephone System.

(10) Form for Return by Company, etc., operating Telephone System.

(11) Form for Tariff of Tolls for Telephone System.

(12) Forms for Annual Reports by Railway Systems.

(13) Forms for Reports as to Examination of Motormen.

(14) Forms for Reports of Accidents by Railway Systems.

(15) Regulation as to height of car steps.

(16) Directions for guidance of applicants under subsection (3) of section 400 of "The Municipal Act."

(17) Directions for guidance of applicants under "The Planning and Development Act.

EXTENSIONS OF MUNICIPAL UTILITIES APPROVED UNDER SUBSECTION (3) OF SECTION 400 OF "THE MUNICIPAL ACT."

An alphabetical tabulation (under names of municipalities) of extensions to public utilities made by municipalities, and approved by the Board under the above subsection (3) will be found in the Appendix, and is indexed under word "Approval."

The total of the debenture by-laws approved in 1918 to pay for these extensions was $1,193,503.00; in 1919, $1,930,158.00, and $1,733,109.00 in 1920. This, of course, does not cover extensions made under by-laws approved by the ratepayers, but only under by-laws approved by the Board under the above subsection (3).

MISCELLANEOUS MATTERS UNDER THE BOARD'S JURISDICTION.

A classified analysis of miscellaneous matters dealt with under the jurisdiction of the Board (arranged alphabetically under the names of the municipalities, companies, or persons affected) will be found in the Appendix. These include Annexations, appeals by Counties against the apportionment of cost of highways as made by the Engineer of the Department of Public Highways, arbitrations, assessment appeals, financial and other Bills reported to the House, Extension of debenture issue period under Municipal By-laws, Extension of time to pass Municipal By-laws, Applications by Municipalities for approval of By-laws to purchase fuel or food and for the weighing of coal and measuring wood, Applications in respect of the Toronto and Hamilton Highway, and of highways less than 66 feet in width, Applications respecting bridges, Incorporations of Towns and erection of villages into towns, Interest increase By-laws of Municipalities, Petitions against Local Improvements, Applications under "The Public Utilities Act," Applications regarding investments of Sinking Funds of Municipalities in such Municipalities' own debentures, Sewage disposal works, Water Supply to suburban districts and many other matters dealt with by the Board.

Under special legislation of the Provincial Legislature many matters are now, at every session, referred to the Board for supervision or adjudication.

PUBLIC UTILITIES.

We have the honour to submit reports for the year ending June 30th, 1920, upon radial electric and electric street railways operating in the Province of Ontario under the jurisdiction of the Board.

Twenty-three Railway Systems reporting intelligibly show a total gross revenue of $12,256,396.21. The net earnings of all these systems shewed an increase over the previous year totalling $89,390.30, but on the other hand 12 of these systems showed a decrease of $1,165,684.06 in net earnings as compared with the previous year.

H. C. SMALL,
Secretary.

March 17th, 1921.

TELEPHONE SYSTEMS.

Three hundred and twenty-one applications under the provisions of "The Ontario Telephone Act, 1918," were dealt with by the Board during the year 1920 as compared with two hundred for the previous year. These may be summarized as follows:

(*a*) For consent to the removal of names from petitions praying for the establishment of telephone systems by municipalities, under Section 7 of the Act.

(*b*) For authority to extend municipal telephone systems into adjoining townships, under Section 11 of the Act.

(*c*) For the approval of by-laws, etc., for the establishment of telephone systems by municipalities, under Section 13 of the Act.

(*d*) For authority to extend the period within which telephone debenture by-laws may be passed, under Section 19 of the Act.

(*e*) For authority to extend payment of the cost of establishing systems under Part II over a period exceeding ten years, under Section 20 of the Act.

(*f*) For consent to the purchase of existing telephone systems by municipalities, under Section 24 of the Act.

(*g*) For an Order fixing the price to be offered for the purchase of telephone systems by municipalities, under Section 25 of the Act.

(*h*) For the approval of municipal by-laws granting use of the highways to telephone systems, under Section 67 of the Act.

(*i*) The right to erect poles and wires on highways in unorganized territories, under Section 71 of the Act.

(*j*) For consent to erect poles upon the same highway upon which pole leads of another system are already erected and for preventing the unnecessary duplication of pole leads, under Section 78 of the Act.

(*k*) For an Order directing the terms and conditions for furnishing telephone service, under Section 80 of the Act.

(*l*) For an Order fixing the terms for erecting poles in a municipality for the purpose of furnishing the service ordered by the Board, under Section 81 of the Act.

(*m*) For the approval of agreements for interchange of telephone service, under Section 82 of the Act.

(*n*) For an Order prescribing the terms for interchange of service between adjoining telephone systems, under Section 83 of the Act.

(*o*) For the approval of tariff charges, under Section 88 of the Act.

(*p*) For authority to expend a portion of Depreciation Fund in the extension of telephone systems, under Section 93 of the Act.

(*q*) For authority to issue additional stock or bonds, under Section 94 of the Act.

(*r*) For the approval of regulations, under Section 95 of the Act.

The Board or its Expert during the year visited ninety different points in the Province in connection with the foregoing applications.

The continued policy of the Board in endeavouring to secure an amicable settlement between the applicant and respondent, wherever desirable and practicable, with the assistance of the Board's Expert, has in the majority of these cases proved successful.

In addition to the applications and complaints referred to, a vast amount of correspondence relating to telephone matters has been dealt with by the Board's Expert through the medium of which much information and assistance has been given to municipalities, companies, and other persons interested, and many difficulties that might otherwise have necessitated a hearing before the Board have been satisfactorily adjusted.

The necessity for Dominion legislation providing for a Joint Board to deal with interchange of service between telephone systems under the jurisdiction of the Board of Railway Commissioners for Canada and telephone systems under the jurisdiction of this Board as is now provided in the case of railways by 1-2 Geo. V., c. 22, s. 5, Statutes of Canada, and also giving the first-named Board authority to order companies under its control to furnish local interchange of service with local and rural telephone systems, continues to be very pressing. It is, therefore, recommended that this matter be again urged upon the Parliament of Canada whenever the opportunity arises. The need for this legislation is the more urgent by the reason of the growing dissatisfaction on the part of the owners of telephone systems within the jurisdiction of Ontario because of the increase in the annual switching charges imposed by The Bell Telephone Company of Canada under its contracts for interchange of service as such contracts are renewed from time to time upon the expiry of the existing agreements. It would appear under present conditions that there is no statutory regulation or control of these charges, which fact leaves the Ontario telephone systems in the position of agreeing to any terms which The Bell Telephone Company of Canada may stipulate, or of depriving the subscribers to these systems of the facility of long distance service. There is a strong feeling throughout the Province that the charges referred to should be subject to the approval of some regulatory body, preferably a Joint Board as is herein suggested.

Owing to the continued high cost of material and labour there has been little new development in the establishment of telephone systems during the year, and the construction of extensions and additions to existing telephone systems has been necessarily limited. There are, however, indications that the year 1921 will see increased activity in this direction, and especially so in the establishment of systems by municipalities under Part II of the Act.

The number of telephone systems of which the Board has record is now six hundred and sixty, operating approximately 100,000 telephones, and representing an investment of about $8,000,000.

There are now eighty-five telephone systems in the Province being operated or under construction by municipalities under the provisions of Part II of "The Ontario Telephone Act, 1918."

Detailed statistics and other information relative to the telephone systems within the jurisdiction of the Board will be found in the booklet, "Telephone Systems, 1921," published concurrently with this Report.

F. DAGGER,

Electrical and Telephone Expert.

APPENDIX TO THE FIFTEENTH ANNUAL REPORT OF THE ONTARIO RAILWAY AND MUNICIPAL BOARD, 1920.

PROCEDURE FILE 1081.

Toronto

vs.

Toronto Railway Company.

(General Case.)

1920.

Jan. 28th. On application of City Appointment made for Hearing for Feb. 11th, 1920, at 11 A.M.

Feb. 11th. Hearing adjounred *sine die,* on 2 days' notice.

Mar. 5th. Board's Order of 19th April, 1918, set aside by Privy Council. 17 O.W.N., 503.

March 16th. Further Hearing, pursuant to Appointment, 11 to 11.45 a.m. Adjourned to 9th April, 10.30 a.m. to give Company opportunity to meet City's claim (as per Privy Council's Judgment). (See Reporter's Notes).

April 9th. Hearing continued 10.30 a.m. to 12.30 p.m. and adjourned to 14th inst., at 10.30 a.m. (See Reporter's Notes).

April 15th. Hearing continued 10.30 to 11 a.m., and adjourned. (See Reporter's Notes).

April 16th. Hearing continued, 2.30 to 4.30 p.m., adjourned for Argument solely, to 10.30 a.m., 26th inst.

April 26th. Hearing continued, 10.30 to 11.45 a.m. Argument concluded. Judgment reserved.

May 1st. Hearing continued, pursuant to special appointment, 10 to 10.45 a.m. Statement by Counsel for Company as to Rolling Stock now on hand in event of arbitration. (See Reporter's notes).

June 1st. Judgment delivered. Order to issue fixing 1st June, 1920, as date for compliance with Board's Order of 27th Feb. 1917.

June 1st. Order issued.

OPINION OF THE BOARD.

The Board issued an Order dated 27th February, 1917, in the following terms, the Respondent referred to being the Toronto Railway Company:

1. "This Board doth further Order that the Respondent do place in operation on its system 100 additional double truck motor cars not later than the First day of January, 1918, and a further one hundred additional double truck cars not later than the First Day of January, 1919."

This Order was ratified and confirmed and declared to be legal, valid and binding by an Act of the Legislature, 7 Geo. V, Chapter 92.

The Company having failed on 1st January, 1918 to furnish 100 additional cars as required by the Order of the Board, the City of Toronto procured to be passed by the Legislature the following as Section 260(a), subsection (1), of "The Ontario Railway Act," assented to on 26th March, 1918:

> 260a—(1) "The Board, for the purpose of enforcing compliance with any order heretofore or hereafter made by it, requiring any railway company operating a railway or street railway in whole or in part upon or along a highway under an agreement with a municipal corporation, to furnish additional cars or equipment for its service, in addition to any other powers possessed by it, may order such company to pay to the corporation of the municipality in which the company so operates, a penalty not exceeding $1,000 a day for non-compliance with any such order."

In the assumed exercise of this power the Board, on 19th April, 1918, issued an Order imposing a fine on the Railway Company in the following terms:

"This Board doth Order that the Respondent do forthwith pay to the Applicant a penalty of $1,000 per day from the 27th day of March, 1918 to the date hereof, both days inclusive, being the sum of $24,000 in all."

On appeal to the Appellate Division of the Supreme Court the penal Order of the Board was upheld (44 O.L.R. 381), but upon appeal to the Judicial Committee of the Privy Council the Order of the Board was set aside. The grounds of the decision of the Privy Council are twofold, one of procedure, the other of substance. The first is expressed in these words: "The procedure adopted by the Railway Board in making the Order under appeal is open to question. The railway Company appeared before the Board on the 19th April, 1918, for the purpose of pursuing the enquiry instituted by the Board on the 30th January, and for no other purpose. No claim has been made by the Corporation for penalties under the recent Act, no notice or summons had been given or issued by the Board which indicated that the question of penalties would come under consideration, nor was this question even referred to at any time before judgment was delivered. . . . . They (the Company) were entitled, before being suspected to a heavy penalty, to have notice of the claim, and an opportunity of meeting it." The ground of substance on which the Board's penal Order was set aside by the Privy Council is expressed thus:

"In their Lordship's opinion it was not the intention of the Legislature that the Board should be authorized to impose penalties except after giving to the Railway Company a warning that, after a specified period, penalties would be imposed and an opportunity of avoiding them by compliance, within that period, with the requirements of the Board, and accordingly the Order of the 19th April, 1918, was not authorized by the Act."

On the 8th March, 1920 the Applicant took out an appointment in the following terms:

Take Notice that the Board has appointed Tuesday the sixteenth day of March, 1920, at the hour of Eleven a.m. at its Chambers, Parliament Buildings, Toronto, to hear and determine whether the Order of the Board herein made on the 27th day of February 1917 has been complied with.

And further take notice that if upon the said hearing it should appear that such order of the Board has not been complied with the Corporation of the City of Toronto will ask the Board for an Order fixing a period within which such Order should be complied with and imposing a penalty for every day in default after that period has elapsed."

Upon the return of the appointment the Respondent tendered the following evidence.

Under date of the 25th March, 1920, the Respondent sent out a call for tenders for the construction of cars in the following terms:

"Dear Sir:

I am sending you herewith plans and specifications for two hundred double truck motor cars on which we would like to have your tender. They are practically the same as those submitted to you in 1918, the principal difference being that the car builder is to mount the bodies on the trucks so that the car when delivered will be complete. We shall furnish the motors, trucks, air brakes, etc.

"The question of building these cars is now before the Ontario Railway and Municipal Board and we desire, if possible, to submit to that body by April 9 statement as to the probable dates of delivery and the cost of these cars."

This circular was addressed to seven manufacturers of car bodies, some carrying on business in Canada and some in the United States. Two of the seven declined to tender, the one on the ground that their plant capacity was taken up to the early part of 1921, and the other on account of the extreme uncertainty in obtaining materials at the present time. The other five put in tenders at prices varying from $9,275 per car to $13,893. With duty, where duty would be payable, freight, cost of inspection, added, the price per car varied from $12,635 to $14,867.

When the cost of the electrical equipment and trucks is added the five tenders received run as follows:

(1)	$26,261	or	$25,892	according to	equipment.
(2)	24,085	or	23,716	"	"
(3)	24,129	or	23,760	"	"
(4)	25,387	or	25,618	"	"
(5)	24,894	or	24,525	"	"

It thus appears that the cost of the 200 cars approximates $5,000,000.

The stipulation for delivery varies: when worked out in each case the date for completion is as follows:

(1) 4th June, 1921.
(2) 15th September, 1922.
(3) 21st October, 1922.

(4) 15th December, 1921.
(5) 10th April, 1921.

These deliveries are not absolutely guaranteed, but are made contingent on the non-occurrence of strikes, non-delivery of material, etc.

In addition the Respondent showed that they would have to provide for the 200 cars when acquired car barns, at an estimated cost of $1,000,000, and further that the handling of the additional power to operate the cars would involve an estimated expenditure of $1,500,000 for equipment.

At the present time the Board does not consider that it is called on to determine the bearing of these facts upon the main question, the supply of 200 additional cars. In case of default by the Company, and an application by the City to impose penalties for default such considerations may be revelant. In view of the course of the litigation and the conclusion of the Privy Council, it is the plain duty of the Board to fix a day for delivery of the cars, and an Order will issue fixing the 1st June, 1921 as the date for compliance with the Board's Order of 27th February, 1917.

There will be no costs to either party, but the Respondents will pay $10.00 in Law Stamps on the Order

Sgd. D. M. McINTYRE,
Chairman.

Dated at Toronto, the 1st
Day of June, A.D. 1920.

June 1, 1920.

ORDER.

THE BOARD having heard the application of the applicant, the Corporation of the City of Toronto, pursuant to Notice of application dated the 8th day of March, 1920, and having considered the evidence submitted by the applicant and respondent:

Orders and directs as follows:

1. That the First day of June, A. D. 1921, be and the same is hereby affixed as the date on which the respondent, The Toronto Railway Company, shall comply with the order of the Board dated 27th February, 1917, requiring the respondent to place in operation on its system two hundred additional double truck motor cars;

2. In the event of failure by the respondent to comply with the Board's said Order on said date the Board will call upon the respondent to show cause why respondent should not pay to the applicant a penalty not exceeding $1,000 a day for non-compliance with said order.

(Sgd.) D. M. McINTYRE,

(Seal.)

Chairman.

PROCEDURE FILE 3856

In the matter of new line to relieve congestion on the Broadview and Parliament routes of The Toronto Railway Co.

Jan. 10th. Order issued in form of approved draft filed.

June 1st. Hearing continued—11 to 11.30 a.m. Adjourned pending Judgment of Appellate Division in P.F. 4778-9. City then to bring matter up on Notice to Railway Company. See Judgment reported 48, O.L.R., 115.

October 24, 1919.

ORDER.

WHEREAS the Board on the Fourth day of January, 1917, ordered the construction of a certain line of street railway on Carlaw Avenue, Guelph Avenue and Pape Avenue in the City of Toronto and by the said order provided that the construction of the said line of railway should be commenced by The Toronto Railway Company on or before the First day of April, 1917, and that the said line of railway should be ready for operation not later than the First day of July, 1917,

AND WHEREAS certain overhead work was done pursuant to the said order but except therefor it was found impossible for diverse reasons to carry out the said order of the Board by the dates mentioned in the said order and the said dates were extended sine die by the Board;

AND WHEREAS The Toronto Railway Company have pursuant to the said order submitted to the Board and to the Corporation of the City of Toronto and to The Toronto Electric Commissioners plans for the construction of the said line of railway including all necessary curves, intersections, overhead work and other equipment and appliances;

AND WHEREAS at the hearing of the Board held this day the said plans were considered by the Board in the presence of the aforesaid parties;

1. THIS BOARD DOTH ORDER that the said order of the Fourth day of January, 1917, be amended by substituting the Fifteenth day of April, 1920 for the First day of April, 1917, as the date for the commencement of the construction of the said line of railway and the Fifteenth day of July, 1920 for the First day of July, 1917, as the date for the completion of the construction of the said line of railway.

2. THIS BOARD DOTH FURTHER ORDER that the plans of the said construction as filed by the Toronto Railway Company be and the same are hereby approved.

3. THIS BOARD DOTH FURTHER DECLARE that save as aforesaid the said order of the Fourth day of January, 1917, is existent, valid and binding on the parties thereto.

4. AND THIS BOARD DOTH not see fit to make any order herein as to costs.

(Sgd.) D. M. McIntyre,

(Seal.)

Chairman.

Procedure File 3960.

Application by The Home Telephone Co. Ltd., under section 31 of "The Ontario Telephone Act" (now section 88 of "The Ontario Telephone Act, 1918") for authority to increase charges for telephone service.

May 4th. Hearing, pursuant to Appointment, 11 a.m., at the Board's Chambers. Judgment reserved.

July 12th. Report of Board's Expert filed.

July 17th. Order.

Report.

The undersigned after having carefully studied this application and all documents filed in connection therewith, including the evidence adduced by all parties interested, recommends as follows:

1. That this application, in so far as it applies to intercommunication between the different systems comprising The York & Ontario Independent Telephone Union, be granted.

2. That any member company of the Union which desires authority to charge its subscribers a toll for each conversation between points upon its own system shall make application for such authority forthwith, each such application, if any, to be considered by the Board at the same time as is such company's application, now pending, for the approval of an increase in the annual charge to its subscribers for service.

3. That the question of the number of free conversations to be permitted within a stated period, between the subscribers to any two member companies of the Applicant Union be a matter of agreement between the companies concerned. such agreement to be approved by this Board.

The undersigned is of opinion that the Board would not be justified in requiring these companies, against their will, to continue to furnish free service between their subscribers and those of any other of their respective systems. These companies do not appear to be bound by any contractual obligations to give service to persons other than their own respective subscribers. They are therefore free to withdraw any such privileges which they have voluntarily granted in the past. The only question to consider is the reasonableness of the proposed charges as to which there is no doubt.

The matter of service between the subscribers to one company although located upon different switchboards is one which does not properly come within the scope of an application by the Union. Such an application should be made by the Company directly interested, which may be under contractual or other obligations to furnish free service to its subscribers over its whole system. Moreover each company should, subject to the Board's jurisdiction, be permitted to be a free agent within its own territory.

The systems affected by recommendation No. 2 are:

The Bethesda & Stouffville Telephone Company, Limited;

The Home Telephone Company, Limited;

The Mount Albert Telephone Co., Ltd.

Each of these companies has an application pending before the Board for authority to increase its annual charges for service. It therefore follows that the area of service to be covered by such annual charges will have an important hearing upon the merits of each application. The desirability of permitting a company to increase its annual charges and at the same time carve up its territory into a number of units, charging a toll for each conversation between any two of such units, are questions which should be brought within the scope of one application and considered together.

This application which contemplates the dividing of
The Home Telephone Company's system into 6 units;

The Bethesda & Stouffville Company's system into 2 units;

The Mount Albert Company's system into 2 units,
and the charging of a toll of five cents per conversation between each unit, disregards the fact that these companies are also applying for authority to increase their annual charges, therefore the authority granted the applicants in this case should be limited to the charging of a toll for each conversation between the subscriber to the system of one member company and the subscriber to the system of any other member company.

July 12th, 1920.

(Sgd.) F. Dagger,

Electrical and Telephone Expert.

July 17th, 1920.

ORDER.

Upon the application of the applicants, The York and Ontario Independent Telephone Union, upon hearing the evidence adduced on behalf of all parties in interest, and upon reading the said application and other material on file,

The Board Orders:

1. That the said application in so far as it relates to the establishment of a toll charge for each conversation or message which originates upon the system of any one of the member companies of the said Union, and terminates upon the system of any other such member company, be and the same is hereby granted;

2. The applicants shall forthwith file an amended schedule of its tariff of tolls to conform with the provisions of Clause 1 hereof;

3. The applicants shall forthwith execute an agreement embodying the terms of the schedule herein referred to and providing for interchange of service between the systems comprising the said Union, and submit such agreement to the Board for approval, pursuant to section 82 of "The Ontario Telephone Act, 1918."

4. The applicants may in the agreement referred to in Clause 3 hereof, provide, at the option of the parties thereto, for rebating to their respective subscribers the charges for a limited number of conversations or messages interchanged within any stated period;

5. Each or any of the undermentioned companies, viz.:

The Home Telephone Company, Limited;
The Bethesda and Stouffville Telephone Company, Limited;
The Mount Albert Telephone Company, Limited,

may, if it so elects, apply to the Board forthwith for authority to charge a toll for each conversation or message originating and terminating upon its system between those subscribers whose lines do not terminate upon the same switchboard, and each such application, if any, will be considered and determined by the Board conjointly with the application of such Company now on file with the Board for authority to increase its annual charges for service.

There will be no costs to either party, but the applicant will pay $30.00, the Board's fee for law stamps herein.

(Sgd.) D. M. McINTYRE,

(Seal.)

Chairman.

PROCEDURE FILE 3961

Application by The Bethesda & Stouffville Telephone Co., Ltd., under section 31 of "The Ontario Telephone Act" (now section 88 of "The Ontario Telephone Act, 1918") for authority to increase charges for telephone service.
See P.F. 3960.

PROCEDURE FILE 3962

Application by The Mount Albert Telephone Co. Ltd., under setcion 31 of "The Ontario Telephone Act" (now section 88 of "The Ontario Telephone Act, 1918") for authority to increase charges for telephone service.

(See P. F. 3960.)

PROCEDURE FILE 3963

Application by The Uxbridge & Scott Telephone Co. Ltd., under section 31 of "The Ontario Telephone Act" (now section 88 of "The Ontario Telephone Act, 1918") for authority to increase charges for telephone service.

(See P. F. 3960.)

PROCEDURE FILE 3964.

Application by The King Telephone Co., Ltd., under section 31 of "The Ontario Telephone Act" (now section 88 of "The Ontario Telephone Act, 1918") for authority to increase charges for telephone service.

(See P. F. 3960.)

PROCEDURE FILE 3966

Application by The Scarborough Telephone Co. Ltd., under section 31 of "The Ontario Telephone Act" (Now section 88 of "The Ontario Telephone Act, 1918") for authority to increase charges for telephone service.

PROCEDURE FILE 3967

Application by The Canadian Independent Telephone co. of East Toronto, under section 31 of "The Ontario Telephone Act" (now section 88 of "The Ontario Telephone Act, 1918") for authority to increase charges for telephone service.

(See P. F. 3960.)

PROCEDURE FILE 4166.

Between:

The Toronto and Hamilton Highway Commission,

Applicant,

—and—

The Municipal Corporation of the County of York,

Respondent.

(Payment re-construction Mimico Creek Bridge)

March 3rd. Application filed to vary Board's Order of 31st May, 1918 herein, and Order of 20th April, 1918 in P. F. 4278 re incidence of cost of building widened bridge.

April 12th. Hearing, 10.30-10.40 a.m. Order to be drafted by Applicants and approved by Respondents or settled before Board.

May 17th. Form of Order settled and issued.

May 17th, 1920.

ORDER.

Upon the application of the above-named applicant, in the presence of Counsel for the applicant and for the Respondents, upon hearing the evidence adduced and upon hearing what was alleged by Counsel aforesaid:

1. This Board doth order and determine that the total cost of replacement of the bridge upon the Toronto and Hamilton Highway where the said Highway crosses the Mimico Creek or River by the construction of a new bridge is the

sum of $36,951.63, and that the additional cost occasioned by the said bridge being constructed of a width of 26 feet instead of the ordinary width of bridges on the roadway is the sum of $9,511.01.

2. And this Board doth further order and determine that the proportion of the cost of such replacement to be contributed by the Municipal Corporation of the County of York is the sum of $20,438.75, which sum is in addition to the proportion payable by the said last mentioned Corporation of the additional cost occasioned by the construction of the said bridge of a width of 26 feet instead of the ordinary width of bridges on the roadway.

3. And this Board doth further order and determine that the proportion of the additional cost occasioned by the construction of the said bridge of the width of 26 feet instead of the ordinary width of bridges upon the roadway, to be contributed by the Corporation of the County of York, is the sum of $2,957.18.

4. And this Board doth further order and determine that the proportion of the additional cost occasioned by the construction of the said bridge 26 feet instead of the ordinary width of bridges upon the roadway, to be contributed by the Corporation of the City of Toronto, is the sum of $4,346.53.

5. And this Board doth further order and determine that the proportion of the additional cost occasioned by the construction of the said bridge of the width of 26 feet instead of the ordinary width of bridges upon the roadway, to be contributed by the Corporation of the Township of Etobicoke, is the sum of $881.58.

6. And this Board doth further order and determine that the proportion of the additional cost occasioned by the construction of the said bridge of the width of 26 feet instead of the ordinary width of bridges upon the roadway, to be contributed by the Corporation of the Town of Mimico, is the sum of $799.98.

7. And this Board doth further order and determine that the proportion of the adidtional cost occasioned by the construction of the said bridge of the width of 26 feet instead of the ordinary width of bridges upon the roadway, to be contributed by the Corporation of the Village of New Toronto, is the sum of $525.74.

8. And this Board doth further order and determine that the proportion of the cost of the sidewalks constructed on the said bridge, to be contributed by the Corporation of the Township of Etobicoke, is the sum of $766.31.

9. And this Board doth further order and determine that the proportion of the cost of the sidewalks constructed on the said bridge, to be contributed by the Corporation of the Town of Mimico, is the sum of $593.50.

10. And this Board doth further order and determine that the proportion of the cost of the replacement of the said bridge to be borne by the applicant is the sum of $5,642.06, and this Board doth order and direct that the said last mentioned sum shall be paid by the applicant.

11. And this Board doth further order and direct that the applicant shall pay $10.00 the fee for law stamps on this order, but otherwise doth not see fit to make any further order as to costs of this application.

12. And this Board doth further order and declare that the aforesaid amounts are fixed as of the 21st day of January, 1920, and that each of the said amounts shall bear interest from that date until paid at the rate of 6% per annum.

(Seal)

(Sgd.) D. M. McINTYRE,
Chairman.

Procedure File 4278.

In the Matter of the Application of The Toronto & Hamilton Highway Commission, under subsection (2) of section 13 of "The Toronto and Hamilton Highway Commission Act," for leave to construct the roadway between the westerly limit of the City of Toronto and the westerly limit of O'Connor Road, of a width of 24 feet instead of the ordinary width.

March 3rd. Application filed to amend Board's Order of 2nd June, 1917, re incidence of cost of widening highway between Toronto and O'Connor Road.

Re Mimico Creek Bridge—

Application filed to amend Board's Order of 31st May, 1918, made in P.F. 4166 and Order of 20th April, 1918, made in P.F. 4278.

March 18th. Further hearing pursuant to appointment, 10.30 a.m. to 12.30 p.m. Adjourned April 12th at 10.30 a.m. Applicants will notify all parties in this case and P.F.F. 4166, 4253 and 4254 of the adjournment.

April 12th. Hearing continued, 10.30 a.m. to 12.15 p.m. Judgment reserved.

April 22nd. Judgment delivered.

May 4th. Final statements, &c., filed.

May 17th. Further hearing, pursuant to appointment, 11 a.m. to 1.15 p.m. Order granted as applied for. Form of same settled.

May 19th. Order issued.

OPINION OF THE BOARD

This is an application by the Toronto and Hamilton Highway Commission under Section 13 of the Commission's Act, for an Order of the Board approving the apportionment made by the Commission of the additional cost occasioned by widening the highway from 18 feet as originally proposed to 24 feet from the O'Connor Road to the west limits of the City of Toronto. The percentage of the apportionment as between the contributing municipalities was fixed by Order of the Board dated 2nd June, 1917, when also the additional widening was approved, and those percentages were not in question on this application. When the Order of the Board dated 2nd June, 1917, was made the work had not been done, and consequently the actual sum payable by each of the contributing municipalities could not be determined. Now that the work is completed, and the exact cost ascertained, the Commission asks the Board to apply the percentages found by its former Order to a sum alleged to be the additional cost occasioned by the greater width of the highway, and so determine the exact sum payable by each of the contributing municipalities. The Commission represented that the entire cost of the widened highway from the O'Connor Road to the west limits of the City of Toronto was $296,649.18.

Of this the Commission claimed to deduct the following:

Commission's share	$103,478.25
Local work, Etobicoke Township	10,674.12
" " Mimico	25,181.07
" " New Toronto	10,845.58
	$150,179.02

This gives the cost of the additional widening as $146,470.16. To this conclusion, by which the construction of the additional 6 feet cost nearly as much as the central 18 feet, with the extra local work in the three minor municipalities superadded, the municipalities strongly objected. Enquiry disclosed that this excessive cost of the additional widening arose from the fact that the cost of the original highway of a width of 18 feet was computed on the basis of utilizing the dollarway pavement extending for about two miles from the west limits of Toronto, while the cost of the highway of 24 feet was the actual cost of the highway as it stands to-day, the dollarway pavement having been destroyed and removed.

This raises the clear issue of fact whether up to the point where the Commission decided to widen the highway to 24 feet it was the understanding that the dollarway pavement should be utilized as a part of the new highway. A perusal of the notes of evidence taken at the sittings of the Board in April and May, 1917, shows clearly that at that time the City of Toronto contended that the dollarway pavement was to be abandoned and an entirely new highway was to be laid from the west limits of Toronto, and that the city could establish its contention. The Board on this wrote Mr. Fairty to furnish the proofs he referred to, both to the Board and to the Commission. In response to this the Board has received a quantity of material from Mr. Fairty to only one document in which it is necessary to refer. A certified copy of the minutes of the meeting of the Toronto City Council dated 3rd April, 1916, contains a communication addressed to the Mayor and Board of Control of the City of Toronto by Mr. Gooderham, the Chairman of the Toronto and Hamilton Highway Commission. This communication is dated the 15th February, 1916, and was written to apprise the Mayor and Board of Control that the original estimate of cost of the highway, $600,000, was inadequate, that the construction of the highway would cost $920,000, and that the City of Toronto would be asked to increase its contribution from $150,000 to $250,000. This communication contains the following:

"At this particular time some very unfair comments are being made on the "Commission's proposed deviation of the road through the County of York, "and I should like to explain the reason for our suggesting the deviation. In "the first place the York County Highway Commission have constructed "about two miles of roadway west of the Humber along the Lake Shore "Road, which if our roadway is built on this road, will have to be torn up "and thrown away, as while it may be all right so far as local traffic is con"cerned, it is neither wide enough nor good enough to stand the amount of "traffic that a through highway will carry."

It is to be noted that in February, 1916, when this communication was sent to the Mayor of Toronto, there was no decision to widen the highway to 24 feet—that decision was approved by the Board's Order of 2nd June, 1917—and the communication evidences an intention to build an eighteen foot highway, and to destroy the dollarway pavement. Upon this evidence the Board must hold that the municipalities have made good their contention that the percentages fixed by the Board's Order of 2nd June, 1917, should not be applied to the sum of $146,170.16, for the purpose of computing the apportionment amongst the municipalities of the additional cost of the widening, but to some less sum to be obtained by deducting the estimated cost of an 18 foot highway from the west limits of Toronto to the O'Connor Road, from the actual cost of the 24 foot highway, making all proper allowances for changes and costs incidental to the widened highway as to sewers, reinforcing, etc. If an apportionment based upon this mode of computation is submitted to the Board it will be glad to deal with the matter promptly.

(Sgd.) **D. M. McIntyre,**
Chairman.

Dated at Toronto the 22nd day of April, A.D. 1920.

May 17th, 1920.

Order

Upon the application of the above named applicant in the presence of counsel for the applicant and the respondent upon hearing the evidence adduced and upon hearing what was alleged by counsel aforesaid,

1. This Board doth order and determine that the additional cost occasioned by the construction of the roadway of the applicant of a width of 24 feet from the westerly limit of O'Connor Road to the westerly limits of the City of Toronto instead of the ordinary width of the roadway of the applicant is the sum of $93,454.16.

2. And this Board doth further order that the order made by this Board herein on the 2nd day of June, 1917, be amended by substituting the following percentages in lieu of the percentages set out in the said order.

Proportions of additional cost:

Corporation of the City of Toronto	45.7%
Corporation of the County of York	
Corporation of the Township of Etobicoke	
Corporation of the Village of New Toronto	
Corporation of the Town of Mimico	54.3%
	100%

Proportions of said 54.3%:—

The Corporation of the County of York	57.26
The Corporation of the Township of Etobicoke	17.07
The Corporation of the Village of New Toronto	10.18
The Corporation of the Town of Mimico	15.49
	100%

And this Board doth further order and determine:

3. That the proportions of the said additional cost to be contributed by respondents is as follows:—

City of Toronto	$42,708 55
County of York	29,056 94
Township of Etobicoke	8,662 28
Village of New Toronto	5,165 90
Town of Mimico	7,860 49

4. And this Board doth further order and determine that the cost of the local work in connection with the construction of the aforesaid portion of the said railway to be contributed by the respondents is as follows:

Township of Etobicoke	$11,305 07
Town of Mimico	26,669 62
Village of New Toronto	11,486 67

which amounts are in addition to the amounts set out in paragraph 3 hereof.

5. And this Board doth further order that the proportion of the cost of the construction of the said portion of roadway to be borne by the applicant is the sum of $171,073.25 and doth order and direct that the said last mentioned sum be paid by the applicant.

6. And the Board doth further order and declare that the aforesaid amounts are fixed as of the 31st day of January, 1920, and that each of the said amounts shall bear interest from that date till date of payment at the rate of six per cent per annum.

7. And this Board doth order and direct that the applicant do pay $30.00 the fee for law stamps on this order but otherwise doth not see fit to make any further order as to costs of this application.

(Sgd) **D. M. McIntyre,**
Chairman.

(Seal)

Procedure File 4353.

Between:

The Toronto and Hamilton Highway Commission,
Applicant,

—and—

The Corporation of the County of Peel,
Respondent.

(Payment reconstruction Credit River Bridge)

March 3rd. Application filed for final determination of evidence of cost.

April 12th. Hearing continued 10.40 to 10.50 a.m. Order to be drafted by applicants and approved by respondents and Village of Port Credit or settled before Board.

May 17th. Form of order settled.

May 19th. Order issued.

May 17th, 1920.

Order

Upon the application of the above named applicant in the presence of counsel for the applicant, no one appearing for the respondent, although duly served with notice of the hearing of this application, upon hearing the evidence adduced and upon hearing counsel for the applicant:

1. This Board doth order and determine that the total cost of the replacement of the bridge upon the Toronto and Hamilton Highway where the same crosses the Credit River by the construction of a new bridge pursuant to the order of this Board herein dated May 31st, 1918, is the sum of $39,301.87.

2. And this Board doth further order and determine that the proportion of the cost of such replacement to be contributed by the respondent, the Corporation of the County of Peel is the sum of $29,199.80.

3. And this Board doth further order and determine that the proportion of the aforesaid cost of such replacement to be contributed and borne by the Village of Port Credit according to the percentage of the cost of the sidewalks assumed by the said Corporation of the Village of Port Credit is the sum of $1,086.89.

4. And this Board doth further order and determine that the proportion of the cost of the replacement of the said bridge to be contributed and borne by the Toronto and Hamilton Highway Commission is the sum of $9,015.18

and doth order and direct that the said last mentioned sum shall be paid by the Commission.

5. And this Board doth further order that the applicant shall pay $10.00 the fee for law stamps on this order, but otherwise doth not see fit to make any further order as to costs of this application.

6. And this Board doth further order and declare that the aforesaid amounts are fixed as of the 21st day of January 1920, and that each of the said amounts shall bear interest from that date until paid at the rate of 6% per annum.

(Sgd) **D. M. McIntyre,**
Chairman.

(Seal)

Procedure File 4354

Between:

The Toronto and Hamilton Highway Commission,
Applicant,

—and—

The Corporations of the County of Peel and the County of York,
Respondents.

(Payment reconstruction Etobicoke River Bridge)

March 3rd. Application filed for final determination of evidence of cost.

April 12th Hearing continued 10.50 to 11 a.m. Order to be drafted by Applicants and approved by respondents or settled before Board.

May 17th. Form of order settled.

May 19th. Order issued.

May 17th, 1920.

Order

Upon the application of the above named applicant in the presence of counsel for the applicant, no one appearing for the respondent although duly served with notice of the hearing of this application, upon hearing the evidence adduced and upon hearing counsel for the applicant.

1. This Board doth order and determine that the total cost of the replacement of the bridge upon the Toronto and Hamilton Highway where the same crosses the Etobicoke River by the construction of a new bridge pursuant to the order of the Board herein dated 31st May, 1918, is the sum of $33,438.10.

2. And this Board doth further order and determine that the proportion of the cost of such replacement to be contributed by the respondent the Corporation of the County of Peel is the sum of $10,386.57.

3. And this Board doth further order and determine that the proportion of the cost of such replacement to be contributed by the Corporation of the County of York is the sum of $10.386.58.

4. And this Board doth further order and determine that the proportion of the cost of such replacement to be borne by the applicant is the sum of $12,664.95 and doth order and direct that the said last mentioned sum be paid by the applicant.

5. And this Board doth further order and determine that the applicant shall pay the sum of $ 10.00 fee for law stamps on this order, but otherwise does not see fit to make any further order as to costs of this application.

6. And this Board doth further order and declare that the aforesaid amounts are fixed as of the 21st day of January, 1920, and that each of the said amounts shall bear interest from that date until paid at the rate of 6% per annum.

(Sgd) **D. M. McIntyre,**
Chairman.

(Seal)

Procedure File 4743.

Application by the Township of Malahide, under Section 460, subsection (9) of "The Municipal Act", to be relieved from the obligation to rebuild a bridge across a certain ravine on original road allowance between First and second concessions of the said township, known as "Stalter Gully."

June 7th. Further hearing, pursuant to appointment, 2.45 to 5 p.m. at Board's chambers. Township to prepare plans and specifications and advertise for tenders (Mr. Middlemist, Board's engineer, to see that plans do not call for too expensive a structure), this to be done within 6 months and hearing adjourned to 15th September, 1920. Exoneration to township continued in interim. (See reporter's notes).

Sept. 15th. Order, extending operation of original order to Nov. 15th, 1920, issued.

Nov. 16th. Hearing, pursuant to appointment, 2 to 3.30 p.m. Protection to township extended to 1st March, 1921.

Procedure File 4778.

Between:

The Toronto Electric Commissioners
(Toronto Hydro-Electric System),

Applicants,

—and—

The Toronto Railway Company and the Corporation of the City of Toronto,
Respondents.

(For removal of railway company's trolley wires on Carlaw, Guelph and Pape Avenues)

March 17th. Order issued.

March 30. Notice of motion for leave to appeal served by Toronto Railway Company.

April 7th. Notice of appeal served by Toronto Railway Company.

June 30th. Board's judgment reversed on appeal. See 18 O.W.N., 366. 48, O.L.R., 115.

March 16th, 1920.

Order

Whereas the Board on the fourth day of January, 1917, ordered the construction of a certain line of steet railway on Carlaw Avenue, Guelph Avenue and Pape Avenue in the City of Toronto;

And whereas the plans of the proposed construction were duly approved by the Board;

And whereas pursuant to such order and the plans so approved certain poles and wires were erected by The Toronto Railway Company;

And whereas on the thirty-first day of May, 1918, the applicant launched this application to the Board for an order compelling the Toronto Railway Company to remove such wires and poles on the ground that their proximity to the poles and wires of the applicant endangered life and property;

And whereas the Board after hearing the evidence adduced upon the application, and counsel for all parties, and after reserving judgment until the third day of October, 1918, delivered judgment on said last named day;

And whereas, on the application of The Toronto Railway Company, permission was given to said company to remove the said wires and the issuance of the order pursuant to such judgment was postponed 'sine die' on account of war conditions, the rights of all parties thereto being preserved in the interim;

And whereas by order dated the twenty-fourth October, 1919, the order of the Board dated fourth day of January, 1917, was amended by extending the time for construction of the said line of railway and the said line was ordered to be constructed according to new plans thereof filed with the Board, all the parties hereto being ordered to do respectively such construction work as was necessary to carry the said new plans into effect;

The Board doth find and determine that the poles and wires of the respondents, The Toronto Railway Company upon Carlaw Avenue, Langley Avenue (formerly Guelph Avenue) and Pape Avenue were, at the date of this application, in such close proximity to the poles and wires of the applicant as to endanger life and property.

And this Board doth further order that the respondents, The Toronto Railway Company do pay to the applicant any costs, charges and expenses they may be put to in carrying out the work called for by the said new plans approved by the Board which is rendered necessary solely by the existence of the poles and wires of the respondents The Toronto Railway Company upon the above streets.

And this Board doth further order that the respondents The Corporation of the City of Toronto do pay to the applicant any other costs, charges and expenses which the applicant may be put to in carrying out said work pursuant to said plans.

And this Board doth further reserve leave to any party hereto to apply for further directions for the carrying into execution of this order, or of determining the incidence of cost in any specific case.

(Sgd) **D. M. McIntyre,**
Chairman.

(Seal)

Procedure File 5000.

Between:

The Corporation of the City of Toronto,

Applicant,

—and—

The Toronto Railway Co.,

Respondent.

(To operate more (all available) cars)

Jan. 28th. On application of City, Appointment made for hearing for Feb. 11th, 1920, at 11 a.m.

Feb. 11th. Hearing adjourned 'sine die' on 2 days' notice.

March 16th. Matter spoken to by counsel for City without previous notice. Company to file information shewing cars not run—1st, because men not available; 2nd, cars in for repair; 3rd, Company think not necessary. Adjourned 'sine die'. (See reporter's notes).

April 6th. Inspector's report filed.

April 7th. Inspector's report filed.

June 1st. Hearing continued, 11 a.m., 11.30 a.m. to 12 M. Board's traffic inspector to continue taking counts and report to Board. Board will direct further supply of morning rush cars if such counts show necessity therefor.

June 28th. Inspector's report filed.

Toronto, April 6th, 1920.

Dear Sir: Re the a.m. rush hour service on Toronto Railway Co. Lines.

I made observations of the a.m. rush hour service during the month of March and took a count of passengers on a few of the larger lines (a copy of which is on file in the Board's office).

I find that conditions are very good at the present time and with the exception of an occasional car I do not see any reason for complaint. This is a condition that is impossible to overcome—the case of a gap in the service—as most people leave themselves so short of time in the morning that they all try to board the first car regardless of how much room there might be on the following cars. Operating conditions at the present time are ideal and with a large number of automobiles in service and short ride passengers walking these all help to improve the service.

Respectfully submitted,

(Sgd.) **E. A. Crossland,**
Inspector.

A. B. Ingram, Esq.,
Vice-Chairman, Ontario Railway & Municipal Board,
Legislative Buildings.

Toronto, April 7th, 1920.

Dear Sir: Re cars running into Dundas car barns.

With reference to the cars on the Dundas line running into the barns at Howard Park Avenue as complained of by Mr. Geary at the Hearing on Tuesday, March 16th. I took a count of passengers that were turned out of the different cars running into the barns, and how long they had to wait before they were lifted by a car going to Keele Street, (a copy of which count is on file in the office of the Board).

Mr. Geary's complaint I understand was based between 8 and 9 p.m. The cars that run into the barns between these hours are extra cars that are put on to take care of the extra traffic going to the theatres and are not needed after this rush is over. They run into the barns going west as this is the natural way to run extra cars in against the traffic. These cars are designated to Howard Park Avenue by an illuminated sign in the front corner of the car. If the service is running regularly any passengers who might board these cars, who desire to go to Keele Street, do not have to wait long for a through car. However, I wish to say that during January and February, owing to the extreme weather conditions, there were frequent gaps in the service and at times a lot of inconvenience was caused to passengers turned off cars running into the barns. I observed these conditions myself, and about the middle of February I drew Mr. Hubbard's and also the Divisional Superintendent's attention to the matter. and they both informed me they would look into it. These conditions are changed and at the present time I do not see that there is any reason for complaint.

Respectfully submitted,

(Sgd.) **E. A. Crossland,**

Inspector.

Mr. A. B. Ingram,
Vice-Chairman, Ontario Railway & Municipal Board,
Legislative Buildings, Toronto.

Toronto, July 28th, 1920.

Dear Sir: Re Service on Toronto Railway from 3.30 to 5 p.m. and from 6 to 7 p.m.

I took a check on the following lines of the Toronto Railway Company: Yonge Street, Avenue Road, College, Carlton, Broadview, Queen, Dundas and Bathurst Streets, (a copy of which is on file in the office of the Board). These figures speak for themselves, and in my opinion, with the exception of the Avenue Road line, there is no reason for complaint. The season of the year has a great deal to do with the comparatively light traffic at this time, owing to the schools and colleges being closed, and a large number of people being on holidays tends to lessen the traffic.

The Avenue Road line connects with the St. Clair Avenue Civic Car Line, and is equipped with single truck cars which in my opinion are very unsatisfactory on a line like Avenue Road, which has such a large feeder.

In order for the Company to equip the Avenue Road line with double truck cars it would be necessary for them to run an air service from the Yorkville Avenue barn over to Avenue Road or down to Bloor Street. The Company have never seen fit to do this for some reason or other—whether the City objected or not I do not know—but in my opinion it should have been done long ago. However, if this cannot be done the Company should lessen the headway with the present single truck cars.

With reference to the a.m. rush hour service, I have no further report to make, as conditions are unchanged since I made my report on the a.m. rush hour service on April 6th last.

Respectfully submitted,

(Sgd.) **E. A. Crossland,**
Inspector.

A. B. Ingram, Esq.,
Vice-Chairman, Ontario Railway & Municipal Board,
Toronto, Ont.

Procedure File 5381.

Application by Thomas Stothers (Trustee, Ontario West Shore Railway Co.), under section 6, Chap. 118, Ontario Statutes, 1919, for approval of proposed investment of funds on hand with The Toronto General Trusts Corporation, for five years at 5½%.

Jan. 30th. Hearing, pursuant to appointment, 11 a.m. to 1.40 p.m.

(1) Board allows Trustee 1½% on proceeds of sale to Hydro-Electric Commission,=$2500, out of which Mr. Stothers will pay his solicitor—apart from application to Board—costs for which not already taxed are to be taxed;

(2) Toronto General Trusts Co. to be paid 3% on income collected from Victory Bond Investment;

(3) Affidavits to be filed shewing title to Bonds in Mr. Heath;

(4) Proof of value given for $20,000 Bonds by Provincial Steel Co. to be furnished;

(5) Cash on hand to be paid out by Trust Company and parties entitled under Order to be made later.

March 25. Approved draft order filed.

March 27th. Order issued.

April 30th. Taxation, 3 to 5 p.m. under Order herein of Bills of Costs of solicitors for Thos. Stothers, trustee, the Municipalities and the Toronto General Trusts Corporation (in the presence of solicitors for all parties or their agents). Costs of Thos. Stothers, trustee, taxed at $237.50, of Toronto General Trusts Corporation at $120.00, and of the Municipalities interested at $110.00.

Jan. 30th, 1920.

Order

In the matter of the Ontario West Shore Railway Company, and of Ontario Statutes, 4 George V. Chapter 122, and 9 George V., Chapter 118, and

In the matter of the petition of Thomas Stothers, filed, to have his accounts as Trustee passed and an allowance made to him for his services as such, together with his disbursements, and to pass the accounts of the

Toronto General Trusts Corporation, and to have fixed the commission and charges to which the Toronto General Trusts Corporation is and will be entitled.

Upon the application of Thomas Stothers, the trustee appointed under Chapter 135 of the Statutes of Ontario, 1913, upon reading his petition and his accounts brought in and filed with this Board, upon hearing his evidence taken under oath, and upon the application of the Toronto General Trusts Corporation, appointed under order of this Board, dated the 31st day of May, 1917, to receive the proceeds from the sale of certain assets of the said railway company, upon reading the accounts of the said Toronto General Trusts Corporation, brought in, and the affidavit of Archibald David Langmuir, and upon hearing what was alleged on behalf of the said Thomas Stothers, the said Toronto General Trusts Corporation and the Municipalities of Goderich, Kincardine, Huron and Ashfield, and Colonel W. Beattie, the agent of Robert Heath, the holder of the unguaranteed bonds of the said railway company:

1. This Board doth find and declare that the said The Toronto General Trusts Corporation has received as proceeds of said sale of the assets of the said Ontario West Shore Railway Company, pursuant to said Order of 31st May, 1917, the sum of $134,735.47, to which the said The Toronto General Trusts Corporation have properly added for interest up to the 12th day of October, 1919, the sum of $8,680.46, making a total of $143,415.93.

2. This Board doth further find and declare that the said Trustee and the Toronto General Trusts Corporation, pursuant to Chapter 118 of the Statutes of Ontario, 1919, and to the order of this Board made on the 12th day of November, 1919, has invested the sum of $135,000.00 out of the said moneys in its hands in the purchase of Dominion of Canada 1919 Fifteen-year Bearer Victory Bonds, and that the said Toronto General Trusts Corporation has further properly paid out and disbursed the sum of $1166.42, leaving a balance in the hands of the said Toronto General Trusts Corporation of $7,249.51, in addition to the said Dominion of Canada Victory Bonds.

3. This Board doth further order that out of the said balance of $7,249.51 in the hands of the said The Toronto General Trusts Corporation, there be forthwith paid by said Trusts Corporation to the said Thomas Stothers, as such trustee as aforesaid, the sum of $2500.00, less the sum of $298.53 hereinafter mentioned, as compensation for his care, time and trouble in and about the trusts performed by him under and pursuant to the said Act of the Legislature and amendments thereto including personal disbursements and solicitors fees and disbursements incurred by the said Stothers.

4. This Board doth further order that on taking an account of the various articles, such as ties, etc., sold by the said Thomas Stothers as such trustee, by and with the consent of the said Corporations, that he received the sum of $2325.60 and interest thereon $46.15, making a total of $2371.75, out of which he properly paid and is entitled to be credited with the sum of $2073.22, leaving a balance of $298.53 in his hands, which said sum is to be deducted from the said sum of $2500.00 so as aforesaid allowed to him as commission.

5. This Board doth further order pursuant to Chapter 118 of the Statutes of Ontario, 1919, that the commission payable to the said The Toronto General Trusts Corporation as compensation for its care, pains,

trouble and expense in collecting in and paying out to the parties entitled thereto the interest accrued and to accrue on the said Victory Bonds be the sum of three per cent on the gross sums collected from time to time.

6. This Board doth further order by and with the consent of the said municipalities that the bills of costs, which have been delivered to the said corporation, of P. A. Malcomson, amounting to $665.28, and Proudfoot, Killoran & Cooke, amounting to $706.27 be forthwith paid to them by The Toronto General Trusts Corporation out of the said funds so in its hands as aforesaid.

7. This Board pursuant to said Chapter 118 of the Statutes of Ontario, 1919, enquired into the issue and ownership of the unguaranteed Bonds, therein referred to, and finds that Robert Heath of Biddulph Grange, Congleton, Cheshire, England, gentleman, is the owner of the unguaranteed bonds numbered 401 to 408 inclusive and 416 to 427 inclusive for $1000.00 each amounting to the sum of $20,000.00, which said bonds were legally issued, that full face value was paid therefor to the Ontario West Shore Railway Company by the Provincial Steel Company and that the said Robert Heath is the bona fide holder thereof and paid full face value therefor.

8. This Board doth further find that the said $20,000 worth of unguaranteed bonds are the bonds by error referred to in the said Act as $15,000.00, instead of $20,000.00, worth of unguaranteed bonds held by the Standard Bank of Canada.

9. This Board doth further order that the costs of and incidental to this application, of the said Trustee, the Toronto General Trusts Corporation and of the said municipalities shall be taxed by the secretary of this Board and paid by the said The Toronto General Trusts Corporation out of the said moneys in its hands as aforesaid to the solicitors of said parties.

10. And this Board doth further order that the sum of $20.00 for Law Stamps be paid on this order by the said The Toronto General Trusts Corporation out of the said moneys so in its hands aforesaid.

(Sgd) **D. M. McIntyre,**
(Seal) Chairman.

Procedure File 5397.

Application by The Sebringville Telephone Co. Ltd., under section 88 of "The Ontario Telephone Act, 1918," for authority to increase charges for service.

Jan. 17th. Order.

Jan. 17th, 1920.

Order

Upon the application of the above named applicant, upon hearing the evidence adduced on behalf of all parties, upon reading Statements of Assets and Liabilities, Receipts and Disbursements, and other material filed.

The Board orders that the applicant, The Sebringville Telephone Company, Limited, shall be authorized to charge an annual rental of $16.50 for telephone service, to take effect as from the first day of January, 1920.

And the Board further orders:—

(1) That, for the purpose of providing a fund to meet the cost of the renewal of its plant and equipment, the applicant shall on December 31st, 1920, and each year thereafter set aside out of its earnings a sum equal to not less than five percent. of the total value of the plant and equipment used in the applicant's business on December 31st in each such year. The fund so provided shall be applied exclusively to the cost of renewing such portion of the said plant and equipment as may from time to time be rendered necessary by depreciation or obsolescence, and after deducting therefrom such amounts as may be so expended in any one year the residual amount shall be placed on deposit in a chartered bank, as a separate account, or may be temporarily used in the purchase of such securities as the Board may approve of until the exigencies of the applicant's business renders necessary the application, as aforesaid, of such fund or any portion thereof.

(2) That the applicant shall on or before the fifteenth day of January in each year, furnish the Board with a report setting forth: (a) The total amount standing at the credit of the fund referred to in Clause 1 hereof on the 31st day of December in the preceding year; (b) The amount of such fund which has been temporarily used in the purchase of securities; (c) The names and values of the securities so purchased, together with (d) a certified statement from the bank in which the fund is deposited, showing the amount standing at the credit of such fund on the last named date.

(3) That the applicant shall keep in such form as the Board may approve separate records of all expenditures upon the construction, operation, maintenance and renewal of its plant and equipment, and shall furnish such information in regard thereto as the Board may deem necessary in order to satisfy the Board that the provisions of the two next preceding clauses are being carried out.

And the Board makes no order for costs, save and except that the applicant shall pay $10.00 for the Law Stamps required for this order.

(Sgd.) **D. M. McIntyre,**
Chairman.

(Seal)

Procedure File 5399.

Between:

L. R. Eckert, et al, (trading as The Sebringville Telephone Co.)
Appellants,

—and—

The Township of Ellice
Respondent

(Assessment Appeal).

Jan. 6th. Judgment delivered.
Order.

OPINION OF THE BOARD

These two appeals, involving the same issue, namely the proper mode of assessing the lines of a local telephone system, in a township, were heard together at the City of Stratford on the 5th November 1919. They turn upon the construction of Section 14 of "The Assessment Act."

Subsection (3) of Section 14 dealing with local telephone systems declares that the lines of a company within any township shall be assessed at their actual value not exceeding in the whole the rates per mile set out in subsection (2); subsection 4 (omitting what is non-essential) declares that in computing the length of such wires for the purpose of such assessment the wires of every line not exceeding 25 miles in length, where all the telephones thereon are operated upon the same circuit, and which is not used as a connecting line between two switchboards, shall be excluded. To one familiar with the operations of a rural telephone system of the class of the appellant it is obvious that the portion of the transmission plant referred to in subsection 4 is that commonly styled the "party lines." The term "party lines" was used in the original of this subsection, 4 Edward VII, Cap. 23, Sec. 14, subsection (3), a subsection which was repealed and replaced by the present subsection effective 6th May, 1915. The repeal and substitution followed no doubt as a consequence of the opinion of the Appellate Division upon the reference to them by the Lieutenant-Governor in Council in Township of Turnberry and North Huron Telephone Company, 4 O. W. N. 598 (15th January, 1913). On that reference the Appellate Division declined to interpret the words "party lines", holding that their meaning was a question of fact to be determined on evidence as all questions of fact should be. "The words," said the Court, "have no defined legal meaning, but were used to convey a technical meaning in connection with telephone equipment." The reference to the Appellate Division was for the purpose of securing harmony in the interpretation of the subsection in question. The need of some unifying authority is shown by a consideration of the judgment of Doyle Co. C. J. in the case re North Huron Telephone Company and Township of Turnberry and re Wroxetor Rural Telephone Company and Township of Turnberry 2 O. W. N. 187 (1910). In these cases it will be seen that the learned County Judge did not exhibit the wise discretion of the Appellate Division, but assuming to dogmatise in respect of a matter as to which he was not fully informed placed an interpretation on the term "party lines" far from the mark. Such and similar irrevelant interpretations of the old subsection coming to the knowledge of the Board it, with a desire to prevent their repetition in future, procured the present subsection to be passed. In the substituted enactment now forming subsection (4) an attempt is made to define the term "party line." This is done in part by description (line where all the telephones thereon are operated upon the same circuit), and in part by exclusion (line which is not used as a connecting line between two or more central exchange switchboards). Having in this way by description and exclusion segregated the portion of the plant which is to be the subject of the enactment the Legislature declares that, where not exceeding twenty-five miles in length it, as under the repealed subsection, shall not be included in the computation of the mileage for assessment purposes.

In the New International Encyclopaedia, 1916, issued by the University Press, Cambridge, U.S.A., Volume 22 under the heading "party lines" we find: "One of the best advance agents of the telephone companies is the party line, whereby two or four (or more) subscribers are connected to the same circuit receiving their service at a reduced rate on account of the economy in line conductors."

The appeal will be allowed and the assessment of every party line not exceeding twenty-five miles in length, and which is not used as a connecting line between two or more central exchange switchboards, should be struck off the rolls.

There will be no costs to either party on any of the proceedings here or below, but there will be a fee of $5.00 on each order payable by each of the respondents.

(Sgd) **D. M. McIntyre,**
Chairman.

Dated at Toronto the sixth day of January, A.D. 1920.

January 6th, 1920.

—Order—

Upon the application of the above named appellants by way of appeal from the order or decision of His Honour Judge Barron, dismissing the appeal of the appellants from the Court of Revision for the Township of Ellice in the presence of counsel for the appellants and respondent, upon hearing the evidence adduced on behalf of the appellants and respondent and upon hearing counsel for the appellants and respondent.

The Board orders that the said appeal be and the same is hereby allowed and that the assessment complained of be and the same is amended by reducing the same to the amount of $292.96, being one-half of the sum of $585.93 the assessed value of the poles and wires of the appellants erected on and along the boundary line between Townships of Downie and Ellice comprising eight circuits used as connecting lines between two Central Exchange Switchboards, and that all the remainder of said assessment be struck off the assessment rolls of the said respondent.

And the Board makes no order for costs to either party on any of the proceedings here or below save and except that the respondent shall pay five dollars for the law stamps required for this order.

(Sgd) **D. M. McIntyre,**
(Seal) Chairman.

Procedure File 5400

Between:

L. R. Eckert, et al, (trading as The
Sebringville Telephone Co.)

Appellants,

—and—

The Township of Downie

Respondent

(Assessment Appeal)

Jan. 6th—Judgment delivered.
Order.

(For copy of Judgment see P. F. 5399)

January 6th, 1920.

—Order—

Upon the application of the above named appellants by way of appeal from the order or decision of His Honour Judge Barron, dismissing the appeal of the appellants from the Court of Revision for the Township of Downie in the presence of counsel for the appellants and respondent, upon hearing the evidence adduced upon behalf of the appellants and respondent and upon hearing counsel for the appellants and respondent.

The Board orders that the said appeal be and the same is hereby allowed and that the assessment complained of be and the same is amended by reducing the same to the amount of $292.96 being one-half of the sum of $585.93 the assessed value of the poles and wires of the appellants erected on and along the boundary line between the Townships of Downie and Ellice comprising eight circuits used as connecting lines between two Central Exchange Switchboards, and that all the remainder of said assessment be struck off the assessment rolls of the said respondent.

And the Board makes no order for costs to either party on any of the proceedings here or below save and except that the respondent shall pay five dollars for the law stamps required for this Order.

(Sgd) **D. M. McIntyre,**
Chairman.

(Seal)

Procedure File 5404

Between:

The Department of Public Highways of Ontario

Applicant,

—and—

The Cobourg and Grafton Toll Road Co.

Respondent

Application under section 29 of "The Ontario Public Works Act" for determination of amount of compensation to be paid on expropriation of Cobourg and Grafton Toll Road.

March 29. Hearing, pursuant to appointment, 2.45 to 6 p.m., adjourned to 10 a.m.

March 30th. Hearing continued, 10 a.m. to 3 p.m. Adjourned to 8th April, 10.30 a.m.

April 19th. Hearing continued 10.30 to 11.15 a.m. Adjourned to May 6th, 1920, at 10.30 a.m.

May 31st. Hearing 10.30 a.m. to 5 p.m. Award reserved.

July 9th. Judgment delivered.

July 12th. Award issued.

Sept. 1st. Application for leave to Appeal received from owner's solicitor.

OPINION OF THE BOARD

On the 23rd of May, 1919, the Department of Highways of the Province took possession of the Cobourg and Grafton Toll Road pursuant to notice in that behalf and other proceedings requisite to vest that road in the Crown under the provisions of the Provincial Highway Act 7 Geo. Vth, Chap. 16. The Company was incorporated by Statute of the Province of Canada—10 and 11 Victoria, Chapter 93, with full power to lay out, construct, make and finish a plank, stone or gravel road at their own proper costs and charges on and over the then travelled Kingston Road, from the limits of the Town of Cobourg to the centre of the Village of Grafton, and upon and over such portions of the line of country lying between the two places, as shall be deemed necessary by the said company to straighten the said road, and also to overcome and avoid hills upon the said line of road. By Section 8 of the Act the existing road from Cobourg to Grafton, and the materials in the same, and the tolls to be fixed and received under the Act were vested in the Company and their successors for ever. The Company after incorporation took possession of the then existing road. So far as appears in evidence the only land bought by the Company was land some three quarters of a mile to a mile in length which was acquired for a deviation for the purpose of improving the grade.

These proceedings are taken under Section 9 of "The Provincial Highway Act (7 Geo. Vth, Chapter 16) for the purpose of determining the compensation to be made to the Company for the lands taken by the Crown.

The evidence shows that the road was in good repair. Major Massie, who was the Governor of the Company—the equivalent of President—for the past twelve years, says at page 73 of the notes of evidence, "the road since "1909 after it was regraded in 1907-08, chiefly 1908, has been in my opinion "steadily improving as a road on account of the manner in which we have "been keeping it up." He then goes into details showing that the Company had been renewing the bridges with permanent bridges out of earnings. He speaks also of the culverts, eighteen in number, some of which are of concrete, some concrete tile, and some glazed tile, while only one is of the cedar box construction. He states that 80% of the gravel used in repairs is beach gravel, and only 20% is pit gravel—the former being superior for the purpose. The ditches he states were cleaned out in 1908 and were sufficient to carry off the water. The evidence of Major Massie is to the effect that the Company's receipts were in later years increasing chiefly from an increase in motor traffic. On page 78 of the notes of evidence Major Massie under examination says:

"Q. It has been suggested that motor traffic is not a desirable traffic?

"A. We were of the opinion that when there were a few motors there "that that was right, but we learned to our profit that it is a highly profitable "traffic now on the road.

"Q. What has made you change your mind?

A. To my mind there seemed to be a sort of transition period back in "about 1912; with the few motors that were on the road we drove off a con- "siderable amount of our vehicular traffic, and the receipts to a certain extent "stood still. We had not then found the cheapest means of keeping the "surface of the road in the best shape to carry the motor traffic and the "vehicular traffic as well. We found that in the spring and fall the motors "seemed to cut the road up and we took to putting on thin coats of gravel "instead of heavy coats and continually dragging the road, and we found "that we could keep the road bed in better shape than it was before, and not "an increased expense in proportion to our increased tolls. The actual receipts as against the disbursements of the Road Company show how rapidly "the receipts were increasing over the cost of maintenance comparatively."

At p. 126 of the notes of evidence Mr. Hogarth, the Chief Engineer of the Highways Department, says that at the times he examined the road it "was in a fair state of repair."

"Q. That applies to the road bed only, not repairing to the bridges "and culverts?

"A. The road bed, that is the travelled surface, was in a fair state of "repair, and was readily passable for public traffic. As regards the structures "there were a number that were satisfactory for the purpose of the Road "Company, but would not be satisfactory for the purposes of the Department, and several of them—I believe two or three—were in such a condition "that I was prepared to condemn them to the Department, and we have "since rebuilt them. They were not safe at the time I examined them."

The Board seems warranted in concluding that the road was in fair condition of repair when taken over by the Department of Highways, that the traffic—chiefly from motor traffic—was steadily increasing with proportionate increases in revenue, that the Company was adapting its methods of repair to the new conditions, with the result that while the road was well maintained the maintenance cost was not disproportionately increased.

The Company puts its claim in two ways:

(1) It claims to be paid upon the basis of compensation set out in Section 41 of its Act of incorporation;

(2) It claims to be paid the reproduction cost of the road less depreciation if any.

To the first claim an adequate answer is found in the fact that the Department is not proceeding under the Company's Act of incorporation, but under the Provincial Highways Act. The Act of incorporation conferred upon the Crown merely an option of purchase which it might or might not exercise. If the Crown had chosen to proceed to acquire the property under the Company's Act of incorporation it would have been bound to adopt the standard of valuation fixed by that Act for determining the purchase price. The Crown has not chosen to exercise the option but has elected to proceed under the Provincial Highways Act. Section 3 of this latter Act has vested in the Crown, acting through the Lieutenant-Governor in Council, power to acquire any highway in Ontario, and Section 9 has by reference incorporated in it certain provisions of the Public Works Act (R. S. O. Cap. 35). Among the provisions so incorporated are those of Section 22 which oblige the Minister taking lands in the exercise of his powers to make compensation to the owner. In Cripps on compensation, 5th Ed. page 102, a work of undoubted authority, as a deduction from the cases there cited it is laid down that "the principle of compensation is indemnity to the owner, and the basis on "which all compensation for lands required or taken should be assessed is "their value to the owner, as at the date of the notice to treat, not their value "when taken to the promoters. The question is not what the persons who "take the land will gain by taking it, but what the person from whom it is "taken will lose by having it taken from him." It is clear from this that the second form of claim put forward by the Company which would adopt the reproduction cost of the property less depreciation as the standard of valuation, cannot be supported.

What then do the claimants lose by the action of the Department of Works in taking their property? They lose tangible property comprising the strip of land some seven miles long and 65 feet wide, with the structures thereon erected, and the intangible franchise or right to "fix, regulate and "receive the tolls and charges to be taken from all persons passing and repassing over the said road."

The only thing of substantial value is the franchise to collect tolls, as that is the only medium through which a revenue is or can be derived to the company. The land constituting the right of way, and comprising some 56 acres, is irrevocably impressed with the character of a highway. It cannot be dealt with by the company in any other quality, nor can any alienee to whom it may be transferred. The value of the land forming the highway cannot be estimated on the basis of the value of adjoining lands, since its only possible use is as a highway, and its only productive value as such arises from the fact that used as a highway certain revenues may be derived in the form of tolls. These observations apply in a greater or less degree to the other tangible property and works which go to constitute the road, and which are enumerated in the claimant's summary; namely, cut and fill ditching, culverts, bridges, road-bed and toll gates.

What then is the value of the franchise or right to collect tolls. Clearly this must be determined by a reference to the earning capacity of the property as a toll road. The Crown by its witness, Mr. K. W. McKay, adopted this mode of valuation, confining himself to receipts and expenditures for five years. This mode of valuation the Board adopts with these variations: (1) the five years taken should be the five years ending 31st December, 1918, and not 31st December, 1917,—thus including the Company's most profitable year which Mr. McKay for some reason omits; (2) the rate of interest at which the net earnings are capitalized should, in the opinion of the Board, be seven per cent. as approximating more nearly than eight per cent. to the normal return to be expected on capital invested. The following is a statement of the Company's receipts and expenditures for the period extending from 28th February, 1914, to 31st December, 1918, the fiscal year of the Company was changed in 1915 to correspond with the calendar year:

	Receipts	Expenditures
1914-1915	2292.80	1492.31
1915 (10 mos.)	243.45	1659.80
1916	2665.95	2261.27
1917	3231.55	1154.50
1918	4255.50	1678.87
	$14880.25	$8246.75
Average for 5 years ...	$2976.05	$1649.35
Excess revenue		1326.70

This amount capitalized at 7% per annum amounts to $18,954.28, and this the Board finds and awards as the compensation to be made to the Company.

Mr. McKay in his calculation deducted from the capitalized value of $11,895 as found by him the sum of $4500 as the "estimated cost of repairs reported on inspection" by Mr. Hogarth, the Department's Engineer. The Board cannot make this large deduction in view of the evidence as to the condition of the road when taken over, and in view of its proved capacity of earning revenues increasing from year to year while in the possession of the Company without a disproportionate increase of operating and maintenance costs.

The claimants should have interest on the amount above fixed at five per cent. per annum from 23rd May, 1919, when the road was assumed by the Department of Public Highways.

The Department of Highways tendered to the claimants when taking over the road the sum of $7,400, which in view of the finding of the Board was entirely inadequate. The claimants should have their costs of the arbitration to be taxed by the Secretary of the Board.

During the hearing copies of certain Orders of the Board of Railway Commissioners for Canada were put in. These show that in 1913 an Order was issued directing the construction of a subway to carry the claimants' highway under the tracks of the Campbellford, Lake Ontario and Western Railway, and the tracks of the Grand Trunk Railway in the Township of Hamilton, in the County of Northumberland. Of the cost of this subway and diversion the claimants were directed to pay ten per cent., and the cost at that time was estimated by Mr. Mountain, the Chief Engineer of the Board, at $104,998.44, an estimate which he thinks is about half of what it would cost to build the subway to-day. In 1915 the Board issued an Order suspending in effect its former Order and directing that gates should be erected and maintained by the railway companies and at their expense. This latter Order was carried into effect and the gates are now in operation. It should be noted that an appeal against the subway Order of 1913 is pending before the Governor-General in Council.

Under these circumstances there are so many elements of uncertainty affecting the claimants' obligations under these Orders, that the Board finds itself unable to determine at this time what, if any, deduction should be made from the amount found above.

There will be no fee for law stamps, as if imposed it should be payable by the Department of Highways of the Province.

(Sgd) **D. M. McIntyre,**
(Seal) Chairman.

Dated at Toronto the ninth day of July, A.D. 1920.

Award

To all to whom these presents shall come:

The Ontario Railway and Municipal Board send greeting.

Whereas the Cobourg and Grafton Toll Road was designated by the Lieutenant-Governor in Council as a Provincial Highway, and on the 23rd day of May, 1919, was entered upon, taken and used by the Department of

Public Works and Highways of the Province of Ontario under the compulsory powers conferred by the Provincial Highway Act—being Chapter 16 of the Statutes passed in the Seventh Year of the Reign of His Majesty King George Vth.

And whereas pursuant to the provisions of Section 29 of "The Ontario Public Works Act"—being Chapter 35 of the Revised Statutes of Ontario—the Honourable the Minister of Public Works and Highways gave notice that he desired that the compensation to be made to the owner of the said road should be determined by The Ontario Railway and Municipal Board.

And whereas The Ontario Railway and Municipal Board did appoint Monday, the 29th day of March, A.D. 1920, at its Chambers in the City of Toronto, to hear the matters alleged by the parties in interest, of which due notice was given by advertisement and otherwise.

And whereas The Ontario Railway and Municipal Board did attend at the said time and place, and subsequently at adjourned sittings held on the 30th day of March, A.D. 1920, the 19th day of April, A.D. 1920, and the 31st day of May, A.D. 1920, respectively, and did hear what was alleged by and on behalf of the said claimant and defendant, both by way of evidence and argument.

Now know ye that we, the said The Ontario Railway and Municipal Board, having taken upon ourselves the burthen of the said arbitration, and having heard and duly considered all the allegations and evidence of the said respective parties of and concerning the said matters in difference, and so referred as aforesaid, do make and publish this our Award in writing of and concerning the said matters so referred to us, and do hereby award and direct that the said the Province of Ontario do pay to the said The Cobourg and Grafton Toll Road Company the sum of $18,954.28 compensation for the damages necessarily resulting to the said Road Company from the exercise by the Honourable the Minister of Public Works and Highways of his powers as hereinbefore recited beyond any advantage which the owner, the said Company, may derive from the contemplated work, together with interest upon the said sum at the rate of five per cent. per annum from the 23rd day of May, A.D. 1919.

And we do further award and direct that the said the Cobourg and Grafton Toll Road Company be paid its costs of the said arbitration and award, to be taxed by the Secretary of the Board.

In witness whereof we have hereunto set our hands and the seal of the said The Ontario Railway and Municipal Board this 12th day of July, A.D. 1920.

(Sgd) **D. M. McIntyre,**
Chairman.

(Seal)

(Sgd) **A. B. Ingram,**
Vice-Chairman.

(Sgd) **J. A. Ellis,**
Commissioner.

Procedure File 5414.

Application by the Department of Public Highways of the Province of Ontario, under section 29 of "The Ontario Public Works Act" for determination of amount of compensation for the Rideau River Branch of the Nepean and North Gower Toll Road expropriated for purposes of a Provincial Highway.

Jan. 20th. Hearing, pursuant to Appointment, Court House, Ottawa, 10.30 a.m. to 5 p.m.

Jan. 21st. Hearing continued, 10 a.m. to 6.15 p.m.; Judgment and Award reserved.

Jan. 21st. Order, making Chas. H. Pinhey, a Party, Mortgagee, to proceedings herein.

Feb. 27th. Opinion and Award issued.

March 2nd. Notice of Motion for Leave to Appeal filed.

June 30th. Appeal dismissed by Appellate Division. (See 18 O.W.N., 368.)

Jan. 21st, 1920.

Order

It appearing upon the hearing of this matter that Charles H. Pinhey, of the City of Ottawa, Esquire, held a first mortgage upon amongst other property, the property in question, and the defendant having applied to the Board for an Order making him the said Charles H Pinhey a party claimant to the proceedings herein, and counsel for the said claimant having stated at such hearing that he had also acted throughout the same on behalf of the said Charles H. Pinhey, and having filed (as Exhibit No. 27) the account of the amount claimed to be due to the said Charles H. Pinhey under his mortgage security and having requested the Board, if made a party, that the said Charles H. Pinhey be made a party mortgagee and not a party claimant or defendant.

The Board orders that the said Charles H. Pinhey be and he is hereby made a party, mortgagee, to the proceedings herein.

And the Board orders that the said Charles H. Pinhey be bound by the proceedings had and taken herein.

(Sgd) **D. M. McIntyre,**
(Seal) Chairman.

OPINION OF THE BOARD

On the 23rd of May, 1919, the Department of Public Highways assumed control of the Rideau River Branch of the Nepean and North Gower Consolidated Macadamized Road under the provisions of Section 9 of "The Provincial Highways Act."

It appears that by instrument duly registered 2nd July, 1878, the Rideau River Macadamized Road Company was incorporated under the provisions of the then Toll Roads Act, for the purpose of constructing a road in the Township of Nepean for a distance of two miles or thereabouts. By instrument registered 6th July, 1874, the Ottawa, Nepean and North Gower Macadamized Road Company was incorporated under the same Act for the purpose of constructing a road in the Township of Nepean to a point in the town line between the Townships of Nepean and North Gower. By instrument registered 16th October, 1878, the above two road companies were under that Act consolidated into one company to be known as the Nepean and North Gower Consolidated Macadamized Road Company.

On the 23rd May, 1919, the claimant company operated a toll road of a total length of seven miles—the southerly portion of a length of five miles, and the northerly part known locally as the Rideau River Branch of a length of two miles, which latter alone the Department of Public Highways has assumed. The claimants had two toll gates on the seven miles of road—one only of which was on the Rideau River section.

Originally the site of the claimants' road was a "forced" road of an average width of 40 feet, and before the claimants' assumption of it was a clay road without macadam, artificial drainage or culverts. After taking over the original forced road the claimants widened the road to a uniform width of 50 feet, this being done in the case of all the abutting owners except one by their moving back their fences the required distance in each case. From one of the abutting owners only, Donald Kennedy, the claimants acquired by purchase and deed of conveyance a small strip off the front of lot letter "N," and the south half of lot letter "M," in Concession "B" of the Township of Nepean, paying therefor the sum of $36.00 consideration money. From this it appears that the claimants are not the owners of any part of the land forming the site of the road except the small strip bought from Kennedy. Notwithstanding this the claimants' claim as owners of 2.37 acres being for all the land taken the entire length of the road to widen it.

The claimants claim $18,442.43 as the value of their property taken. This is shown in detail in a statement prepared by Mr. Askwith and Mr. Lewis, two engineers employed by the company. This statement shows in detail the various elements of value which in their judgment were proper to be considered.

Summarized this statement is as follows:

	Cost New.	Depreciation.	Present Value
Culverts	$ 1,028.00	$ 343.20	$ 684.80
Ditches	1,688.30	168.83	1,519.47
Cuts	1,644.30	none	1,644.30
Embankments	226.72	none	226.72
Sub-grade, levelling, shaping & rolling	681.65	none	681.65
Macadamizing	12,540.65	3,135.16	9,405.49
Toll house	800.00	80.00	720.00
Pump and well	75.00	15.00	60.00
2.37 acres of land	3,500.00	none	3,500.00
	$22,184.62		$18,442.43

The statute under which this arbitration is being held—Sections 10 to 40 of "The Ontario Public Works Act" incorporated by reference into "The Provincial Highway Act" by virtue of Section 9 of the latter Act—does not lay down the reproduction cost of the road less depreciation as the standard of value to be adopted by the Board. Of these sections, Section 22 declares:

"22. The Minister shall make to the owner of land entered upon, taken "or used by him or injuriously affected by the exercise of any of the powers "conferred by this Act due compensation for any damages necessarily result-"ing from the exercise of such powers, beyond any advantage which the owner "may derive from the contemplated work; and any claim for such compen-"sation not mutually agreed upon, shall be determined as hereinafter pro-"vided."

"The principle of compensation" is indemnity to the owner, and the basis on which all compensation for lands required or taken should be assessed is their value to the owner, as at the date of the notice to treat and not their value, when taken, to the promoters. The question is not what the persons who take the land will gain by taking it, but what the person from whom it is taken will lose by having it taken from him." Cripps on Compensation, 5th Ed., p. 102.

What, then, do the claimants lose by the action of the Department of Public Works? In addition to a small toll house and the piece of freehold bought from Kennedy as above set out they lose the franchise or right to collect certain fixed tolls from persons travelling over two miles of toll road, the continuance of that franchise or right being conditional on their maintaining the road in repair as prescribed by the Toll Roads Act. What, then, is the value of this franchise or right? The receipts and expenditures of the company for the past ten years show that the control and operation of the road was a liability and burden rather than a productive asset. The receipts of the company from tolls alone and the disbursements—both in respect of the whole seven miles of road operated are as follows: Exhibit No. 18:

STATEMENT OF RECEIPTS AND DISBURSEMENTS OF BOTH ROADS

Exhibit "18"
P. F. 5414

First year
from Dec. 1st,
1907, to 30th
Nov., 1908.

Each year commences Dec. 1st.

	Receipts for Tolls	Disbursements
1908	$2,449.71	$1,241.56
1909	2,303.47	2,404.62
1910	2,326.10	4,513.63
1911	2519.63	1522.79
1912	2,138.51	2,072.86
1913	2,669.36	6,713.42
1914	2,213.82	8,937.38
1915	2,507.77	1,628.30
1916	2,281.57	1,838.21
1917	2,077.19	2,451.58
1918	2,136.73	2,027.06
	$25,623.86	$35,351.41

This statement shows a deficit for the ten-year period of $9,727.55.

Exhibit No. 19 shows the financial results in respect of the two miles of road being expropriated; the receipts being the actual receipts from the toll gate on this piece of road, and the disbursements being 2/7 of the total disbursements for the whole seven miles of road.

STATEMENT OF ACTUAL RECEIPTS AND OF ESTIMATED EXPENDITURES AS ESTIMATED BY COMPANY REFERABLE TO ROAD IN QUESTION ONLY

Exhibit "19"

First year commencing Dec. 1, 1907, to Nov. 30, 1908.	Receipts		Estimated Expenditures
1908	$ 811.71	P. F. 5414	$ 354.72
1909	932.46		687.04
1910	803.74		1,289.60
1911	773.43		435.08
1912	474.61		592.24
1913	1,098.94		1,918.12
1914	1,082.73		2,553.54
1915	865.49		465.22
1916	789.95		525.20
1917	698.29		700.44
1918	632.42		579.16
	$8,963.77		$10,100.36

This statement shows a deficit for the ten-year period of $1,136.59. But this exhibit for the two-mile section of the Rideau River Road is not all. In May, 1919, Mr. Halford, Inspector of Toll Roads under the Act, made an inspection and found this two-mile section in so bad a condition of repair that in his judgment it would have required an expenditure of $4,300 to put it in proper repair under the Act; and furthermore, failing such repair, he would have deemed it his duty to report to the Minister under Section 45 of the Toll Roads Act that it was so out of repair as to justify an order of cesser of the right to tolls.

Exhibit No. 20 shows the cash receipts of the company other than tolls to have been $10,242.35, arising chiefly from sales of portions of its toll roads other than the seven miles of road operated by the company on 23rd May, 1919. Out of these receipts—chiefly capital—the company paid during the ten-year period, as shown by Exhibit No. 21, the sum of $6,306.20 in dividends.

A comparison of the financial position of the company at the beginning and at the end of the ten-year period, as shown by the foregoing exhibits, is as follows:

11th December, 1907—Company free of debt, and a credit balance of $113.84.

30th November, 1918—Indebtedness of company, $7,510.36.

If this indebtedness is apportioned on a mileage basis as between the Rideau River Section and the remainder of the road, there would be imputed to the two-mile section of the Rideau River Section the sum of $2,145.87, and if to this is added the sum of $4,300, the expenditure required in the judgment of Mr. Halford to put this section in proper repair, it was burdened on 23rd May, 1919, with a debt of $6,445.87.

These figures lead in the opinion of the Board to only one conclusion, and that is that this piece of road, in view of its past history as above outlined, and its condition on the 23rd May, 1919, was a liability and not a profit earning asset to the claimants and, subject to what is to be presently stated, that its assumption by the Deparment was not a damage to the claimants, but rather a benefit.

In the opinion of the Board there was, however, a special adaptability inherent in this section of road for the purposes of a highway which should not be overlooked in view of the authorities upon the subject. It was a forced road to begin with, which implies that it followed the line of least resistance, with the easiest grades and curves. Besides this, work was done by the claimants and structures erected, which greatly enhanced its suitability as a highway. Because of this there was, in the opinion of the Board, the possibility of some of the municipalities interested in the maintenance of this piece of road entering the field as a competitor with the Department of Public Works for the ownership of it, for the purpose of incorporating it in a system of county roads or designating and defining it as part of a suburban road. This possibility the Board assesses at the sum or value of $2,800.

As the Department of Public Highways in November 1918, offered to pay the claimants $3,100, which offer was refused, there should be no costs to either party.

The claimants should have interest on the amount above fixed at the rate of five per cent. per annum, from the 23rd of May, 1919, when the road was assumed by the Department of Public Highways.

(Sgd) **D. M. McIntyre,**
Chairman.

(Seal)

Dated at Toronto this 25th day of February, A.D. 1920.

I agree:
(Sgd) A. B. I.
(Sgd) J. A. E.

Award

To all to whom these presents shall come:

The Ontario Railway and Municipal Board send greetings:

Whereas the Rideau River Branch of the Nepean and North Gower Consolidated Macadamized Road was designated by the Lieutenant-Governor in Council as a Provincial Highway, and on the 23d day of May, A.D. 1919, was entered upon, taken and used by the Department of Public Works and Highways of the Province of Ontario under the compulsory powers conferred by the Provincial Highway Act—being Chapter 16 of the Statutes passed in the seventh year of the reign of His Majesty King George 5th.

And whereas pursuant to the provisions of Section 29 of "The Ontario Public Works Act," being Chapter 35 of The Revised Statutes of Ontario—the Honourable the Minister of Public Works and Highways gave notice that he desired that the compensation to be made to the owner of the said road should be determined by The Ontario Railway and Municipal Board.

And whereasThe Ontario Railway and Municipal Board did appoint Tuesday, the 20th day of January, A.D. 1920, at the Court House in the City of Ottawa, to hear the matters alleged by the parties in interest. of which due notice was given by advertisement and otherwise.

And whereas The Ontario Railway and Municipal Board did attend at the said time and place, and did hear what was alleged by and on behalf of the said claimant and defendant, and the said mortgagee, both by way of evidence and argument.

Now know ye that we, the said The Ontario Railway and Municipal Board, having taken upon ourselves the burthen of the said arbitration, and having heard and duly considered all the allegations and evidence of the said respective parties of and concerning the said matters in difference, and so referred as aforesaid, do make and publish this our Award in writing of and concerning the said matters so referred to us, and do hereby award and direct that the said the Province of Ontario do pay to the said The Nepean and North Gower Consolidated Macadamized Road Company the sum of $2,800 compensation for the damages necessarily resulting to the said Road Company from the exercise by the Honourable the Minister of Public Works and Highways of his powers so hereinbefore recited beyond any advantage which the owner, the said company, may derive from the contemplated work, together with interest upon the said sum at the rate of five per cent. per annum from the 23rd day of May, A.D. 1919.

And we do further award and direct that there be no costs to either or any party hereto.

In witness whereof we have hereunto set our hands and the seal of the said The Ontario Railway and Municipal Board this 25th day of February, A.D. 1920.

(Sgd) **D. M. McIntyre,**
Chairman.

(Seal)

(Sgd) **A. B. Ingram,**
Vice-Chairman.

(Sgd) **J. A. Ellis,**
Commissioner.

Procedure File 5424.

Between:

The Corporation of the Township of Otonabee,
The Corporation of the Township of North Monaghan,
The Corporation of the Township of South Monaghan,
and the Local Board of Health of each Corporation,

Applicants,

—and—

The Corporation of the City of Peterborough,

Respondent,

(Application under section 10 (14) and (15) of Chapter 41, 8 Geo V, (1918). for determination of claim for injury or damage caused by disposition of Peterborough sewage).

April 16th. Further Hearing, 11 a.m. to 1 p.m. Adjourned 'sine die' to be taken upon Notice. Question of costs reserved. Order to be drafted by Solicitor for Applicants and approved by Solicitor for Respondent. (See Reporter's Notes).

Procedure File 5436.

Between:

The Grand Trunk Railway Co. of Canada, and
The International Bridge Co.,

Appellants,

—and—

The Corporation of the Town of Bridgeburg,

Respondent.

Assessment appeal re International Bridge (Canadian End)

Jan. 30th. Agreement, settling matters in dispute, filed.

Jan. 31st. Order.

—Order—

Jan. 31st, 1920.

1. This appeal having come on for hearing on the 22nd and 23rd days of September, 1919, after hearing the evidence adduced and argument of counsel, this Board was pleased to reserve judgment.

2. The appellants and respondents having subsequently by agreement dated the 1st day of December, 1919, settled the matters in dispute between them,

This Board gives its consent and approval to said settlement and makes no order on the said appeal.

(Sgd) **D. M. McIntyre,**

(Seal) Chairman.

Procedure File 5441.

Application by the Township of Tyendinaga, under section 18 of "The Ontario Telephone Act, 1918", for approval of its By-law No. 686, providing for the issue of debentures for establishment of a Municipal Telephone System.

Jan. 28th. Hearing, pursuant to appointment, 10 a.m. to 12 m. New By-law to be submitted providing for issue of debentures covering all expenditures on construction to date, plus interest charges.

Procedure File 5774

In the matter of the petition of L. C. Yeoman, et al, under section 9 of "The Local Improvement Act", against the construction as a Local Improvement of an asphaltic concrete pavement on the west side of Bridge Street, (from the East Line of James St., to the end of the present pavement on the East Line of Octavia Street) in the City of Belleville.

May 17th. Order.

—Order—

Dec. 8th, 1920.

Whereas pursuant to the provisions of Section 9 of "The Ontario Railway and Municipal Act", D. M. McIntyre, Esq., K.C., Chairman of the Board, was authorized by the Board to report on the said petition, and the said D. M. McIntyre, Esq., K.C., did, at a hearing at the City Hall, Belleville, on the 29th day of October, A.D. 1919, enquire into the said petition and made a report thereupon to the Board.

Upon reading the report of D. M. McIntyre, Esq., K.C., the stenographer's notes of the evidence submitted and other material filed and upon hearing what was alleged by the counsel for the applicants and for the City of Belleville,

And upon reading the City of Belleville Engineer's report submitted to the Council of the City of Belleville on the 27th day of November, 1919, and the specifications submitted therewith,

And the Board having consulted its Engineer, Mr. Middlemist, and received his report thereon,

The Board approves of the specifications of the proposed pavement as submitted to the Council by the City Engineer of the City of Belleville on the said 27th day of November, 1919, (copy of which specifications are hereto attached), and directs that the character of the pavement to be constructed on the Local Improvement plan shall be in accordance with the said specifications so submitted by the said Engineer, as aforesaid.

The Board orders that the said petition be dismissed.

And the Board makes no order for costs, save and except that the City of Belleville shall pay fifteen dollars ($15.00) for law stamps required for this order.

(Sgd.) **D. M. McIntyre,**
(Seal) Chairman.

Procedure File 5513

Between:

Schumacher Gold Mines, Ltd.,

Appellants,

—and—

Chas. B. Morgan, and Chas. V. Gallagher,

Respondents.

(Assessment Appeal—Township of Tisdale)

Jan. 22nd. Judgment delivered allowing appeal.

OPINION OF THE BOARD

These are appeals from the judgment of the learned District Judge of the District of Temiskaming allowing an appeal from the decision of the Court of Revision of the Township of Tisdale in respect of certain several assessments of the above Appellants for the year 1919. The appeals were by consent of all parties heard together as the facts in the several cases were either identical or so closely similar that the same question was raised in each for determination by the Board.

It appears that the Assessor for the Township of Tisdale assessed each of the appellants in respect of "Mill Buildings, Plant and Machinery" for specified amounts. The assessments in respect of all six appellants appear to be irregular as not sufficiently identifying the lands assessed, in that the number of the concession, lot, etc., is not given as required by Section 22 of "The Assessment Act", nor is the valuation in each case segregated under columns appropriated to "actual value of land" and "value of buildings" as prescribed by that section. The Board directed that subject to its determination of these appeals these irregularities should be cured and the assessment in these details made to conform to the requirements of "The Assessment Act."

Upon an appeal to the Court of Revision the assessments of the several appellants were struck off, and upon an appeal to the District Judge the several assessments were restored. The question of the propriety of the Judge's determination turns upon the interpretation of subsection (4) of Section 40 of "The Assessment Act" This subsection reads as follows:

"(4) The buildings, plant and machinery in, on or under mineral land, "and used mainly for obtaining minerals from the ground, or storing the "same, and concentrators and sampling plant, and, subject to subsection 9, "the minerals in, on or under such land, shall not be assessable".

No question arises upon these appeals as to the assessability of the buildings, plant and machinery in, on or under mineral land, and used mainly for obtaining minerals from the ground or storing them, nor as to the assessability of the sampling plant or the minerals in, on or under such land; all these are admittedly entitled to exemption from assessment. The crux is the meaning and application of the term "concentrators", and whether the mills of the several appellants properly fall within that designation, and incidentally also what is the status in respect of taxation of certain subsidiary structures such as pump houses, power houses, carpenter, machine and blacksmith shops, assay and refinery buildings, etc.

The question raised here is a question of fact, as in the case Township of Turnberry and North Huron Telephone Company 4 O.W.N. 598, which is to be determined as all questions of fact should be, upon evidence. By the testimony of witnesses, and by a view of the McIntyre Mill, the nature of the operations carried on in the various mills was made to appear as well as the instrumentalities by which these operations are effected. In the result it was clear that by whatever route it is reached the sole objective of these complex operations is the segregation of the valuable constituents from the mass.

Coming now to the instrumentalities by which this objective is reached it appeared that they are divisable into two classes, mechanical and chemical, among the mechanical agencies are the crushers, stamps and other devices used to crush, pulverise, classify and separate the ore. The chemical agencies employed are the amalgam process and the cyanide process reinforced by zinc precipitation; admittedly the latter is a purely chemical process, but as to the amalgam tables some witnesses asserted that their action was wholly physical, and others that it was partly physical and partly chemical. In view of the conclusion reached by the Board on the main question this difference of opinion of the technical witnesses is unimportant.

It may be well to note here that of the six appellants, the Dome Mines Company, the McIntyre Porcupine Mines, and the Dome Lake Mining and Milling Company use both the amalgam and cyanide processes, while the Schumacher Gold Mines and the Porcupine Crown Mines use only the cyanide process and not the amalgam process, and the Davidson Gold Mines use the amalgam and not the cyanide process. All the mills take advantage of a property inherent in gold—its high specifice gravity—a physical fact and of course neither a mechanical nor chemical process.

Upon these facts the case of the respondents cannot be better put than in the words of Mr. Gauthier in cross examination of Mr. Dowsett, p.21 notes of evidence:

"Q. If there is a chemical process used it is not concentration, it is a "process of metallurgy; it is the treatment of the ore metallurgically. In "other words concentration of ore is purely and simply a mechanical operation, therefore a concentrator is a building in which only a mechanical operation is carried on.

Again in argument Mr. Gauthier said as reported pp.537 and 538 notes of evidence:

"We have evidence that the whole process of taking the mineral from "the ground and finally refining the same is, in the mining world, divided "into three distinct branches: the actual mining and storing of the ore, then "there comes the ore dressing operation, or the preparation of that ore for "shipping away from the mine or for treatment on the mining property. Ore "dressing is the preparation by mechanical means of these ores for shipping "away from the mines for further treatment; then there is the division of "metallurgy, which takes in the actual extraction of the metal from the concen-"trates or from the ore. Concentration and concentrating mills are used for "the purpose of the mechanical dressing of ore for the purpose of treating "it, or shipping it as concentrates. The cyanide mill or amalgamating mill "is for the purpose of treating the ore itself as is done here. That is the dis-"tinction between the mills of the Cobalt Camp that are known as concen-"trators and the mills that we have here for the purpose of treating their "ores. The amount of concentration that is accomplished in a concentrating mill is 60 or 75 to one. The concentration that is accomplished, if you want to use the term in that way, in one of our Porcupine mills is from rough ore "down to bullion, or from 1000 to one, showing that the output from these "mills is different from the output from a concentrator."

Applied to the mills in the so called Porcupine Camp, Mr. Gauthier's argument comes to this; if a mill confines itself to purely mechanical processes in ore dressing, its output—a coarse product at best with the values still heavily involved in tons of dross—is concentrate and the mill is a concentrator, and as such exempt; on the other hand such a mill ceases to be exempt from assessment if the mill owner supplements his mechanical appliances with an amalgamating or cyaniding plant or both, which may enable him to turn out bullion of a fineness varying from 950 to 995 parts gold and silver in 1000 parts to from 50 to 5 parts base. In this conclusion Mr. Gauthier is supported by the evidence of several mining engineers. For instance Mr. Arthur Cole, mining engineer for the Temiskaming and Northern Ontario Railway Commission is reported as saying at p. 302 notes of evidence:

"In looking over these different definitions (of concentrator), the one "that seemed to cover the case in point to my understanding best was: that "concentrator is a machine that concentrates mineral by mechanical means "without changing its chemical character."

Again at p. 302 notes of evidence:

"It (concentration) is to a certain extent the art of enriching ores by "mechanical means."

* * * * * * * *

"Q. You would differentiate that term (concentrating mill or concen-"trator) from a cyanide mill or an amalgamating mill?

"A. Yes, when the concentration is the essential part of it; when the "cyanide part becomes the essential part of the mill then I would call it a "cyanide mill.

"Q. And an amalgamating mill?

"A. In the same way, as soon as amalgamation becomes the essential "part of the mill, I would call it an amalgamating mill."

Asked at p. 303 notes of evidence how he would describe the mills in the Porcupine Camp, his answer was:

"I would call them all mills, I would call none of them concentrators."

While holding so strong an opinion Mr. Cole when asked (p. 309 notes of evidence) could give no reason why mills producing bullion should be taxed and the concentrating mills be exempt.

While aware that enactments conferring a special privilege such as this should be construed strictly the Board is of the opinion that to give effect to the intention of the Legislature in this case a broader meaning must be given the term "concentrator", one adaptable to the developments from time to time of a progressive art. For didactic purposes or purposes of exposition it may be convenient to portion out into separate compartments the complex successive processes observed by the Board at the McIntyre Mill, but in practice there is no such arbitrary subdivision. On the contrary the various processes are dovetailed into one another, at one stage chemical process following mechanical, and at another stage mechanical process following chemical, but all contributing in some measure to the consummation sought, the segregation of the valuable and the expulsion of the worthless constituents.

As Professor Haultain when called as a witness for the respondents says at p. 38 notes of evidnce, speaking of the three divisions of ore dressing—mechanical, physical and chemical—referred to by Henry Louis in his works on Ore Dressing:

"Q. Are these used in combination or how?

"A. Always in combination."

Again at p. 80 notes of evidence:

"Q. Various mines that have made and developed these processes have done so to what end?

"A. To reduce the cost and increase the efficiency of the plant and also to increase the capacity of the plant. These are the three ends.

"Q. One would produce a finer product, something nearer the pure article?

"A. Get rid of waste, I should have said.

"Q. The more of that you do, the more of a concentrator you have?

"A. Yes.

Again p. 93 notes of evidence:

"Q. Paragraph 28 page 27 (Independence Correspondence School) states "The obpect of concentrating works is clearly to get the values in an ore into smaller bulk in order to diminish the trouble and expense of further treatment, and not for the immediate actual extraction of the metals in the ore?

"A. That is a pretty good general statement.

"Q. Is that a proper statement, if so, how can you make it coincide with your statement that the cyanide process carried on in the McIntyre mine or mill is concentration.

"A. I think I had the McIntyre Mill in mind when you were reading it; I think that applies to the McIntyre entirely.

"Q. Don't they get it in the form of bullion?

"A. Bullion is only one stage purer than the other. It is not the final product any more than coarse concentration. It is a matter of degree only.

"Q. Bullion is an article of commerce?

"A. So are concentrates. I have sold hundreds of tons of concentrates."

Again on p. 94 notes of evidence:

"Q. Do you mean to say that the object of the McIntyre Mill is not for the immediate extraction of the metals in the ore?

"A. I take that as an ordinary, common sense every day expression. That fits the McIntyre, both first part and second part. You can extract the values of the ore in the form of concentrates—dirty concentrates, clean concentrates—dirty bullion, clean bullion; there is only a difference in degree between any of them. You are extracting values in every case. They are not extracting pure gold or pure silver here; even if they were it would not make it any less a concentrating plant.

"Q. Is the object of the work to produce concentrates?

"A. It is to produce just what they say in the first part of that definition.

"Q. Concentrates?

"A. To reduce the bulk, and that is what the McIntyre does beautifully."

It seems to the Board that the solution of the conroversy is found in certain statements made by Professor Haultain in the course of his testimony; for example—at page 35 notes of evidence:

"Q. Dealing with the concentration of ores, is the term "concentration of ores" a scientific term, or what would you say it is?"

"A. It is not a scientific term, it is a colloquial term, it is a term describing a practice, an art rather than a science. I should think it is a term attached to a very varied practice and very varied art."

Again at p. 40—

"Q. What do you say as to the cyanide process as to whether or not it is a method of concentration?

"A. It is an ideal method of concentration.

"Q. The amalgamation process that is in use at the McIntyre and at the Dome and some other mines, are you familiar with that?

"A. Yes."

* * * * * * * *

"Q. Do you say that is a method of concentration?"

"A. Decidedly."

Again at p. 41:—

"Q. Is the term "concentrator" a term of fixed definite scientific meaning any more than concentration?

"A. No, it is like so many of our other engineering terms. It is used loosely and has a variety of applications.

"Q. What do you say is a concentrator as applied to a plant?

"A. A concentrator as applied to a plant, that is more or less of a colloquialism."

A significant confirmation of Professor Haultain's testimony in this regard is to be found in the Report for the year 1910 of Mr. Cole, Mining Engineer of the Temiskaming and Northern Ontario Railway Commission. At page 19 the flow sheet of the Buffalo Plant using the cyanide process is labelled a "concentrator," and so at page 27 he designates "concentrator" the Nova Scotia Plant turning out bullion by the amalgam process. It is true Mr. Cole stated on the stand that his characterization of these plants was erroneous, and that he had corrected it in later reports, but the fact of the so called error seems to establish that the term "concentrator" had not then at all events taken on a definite scientific meaning which excluded from that category a mill using chemical processes. In the Report of the Bureau of Mines for Ontario for the year 1910 in the division headed "Mines of Ontario," contributed by Mr. E. F. Corkhill, Inspector of Mines, the Buffalo Plant and the Nova Scotia Plant are each designated a concentrator.

From this the Board concludes as a fact that the term "concentrator" is a term loosely applied by technical men to various kinds of mills in various localities, and is not a rigid term of art having a strictly defined signification, and that a mill of the kind in question on these appeals is not disentitled to be termed a "concentrator" by reason of its combining chemical processes—the amalgamating or cyaniding or both—with mechanical apparatus in separating values from mineral bearing ore. It follows that in the opinion of the Board the mills of the appellants are not assessable. Mr. Cole concedes (p. 324 notes of evidence) that the assay office and equipment and the refinery building and equipment go with the mill and should be exempt if the mill is exempt, and with this conclusion the Board agrees.

Two other classes of buildings with their equipment, so far as the latter consists of fixtures, remain to be dealt with.

The first is the class of buildings with their fixed equipment which are by their accessories physically connected with the several mines or mills such as pump house, power house, transformer house, boiler house. These are necessary to the proper functioning of mine and mill, driving, lighting, heating and watering them. "Machine includes the engine that works it" (Stroud's Jud. Dict., Title "Machine"). These, so vitally essential to the efficient working of a modern mine or mill, share the character of the latter and are entitled to the same exemption from assessment to the extent to which they serve mine or mill. To the extent that they are used for purposes other than to serve mine or mill the buildings are assessable, but the fixed equipment in its entirety, as fixed machinery used for manufacturing purposes, is exempt under Section 5, subsection (17) of "The Assessment Act." It may be that the fixed equipment in the pump house cannot be regarded as fixed machinery used for manufacturing purposes, and that it is therefore assessable, but only to the extent that it is used for purposes other than to serve mine or mill. The proportion of the whole value of the pumping plant is however negligible. The telephone equipment of the several appellants, while no doubt fixed machinery, can scarcely be regarded as used for manufacturing purposes. It is, however, physically annexed to mill and mine and is indispensable to the efficient working of both under modern conditions. Besides it exists and is used solely in and about the mines and mills of the several appellants, the installation of certain instruments in the dwelling houses of officials and employees is quite consistent with such sole user. In the view of the Board this equipment is exempt, none of these companies being companies "carrying on business" under section 14 of "The Assessment Act," and assessable as such.

The second class of buildings are those which do not form an integral part of mine or mill by reason of physical annexation as do those in the first class, and these are in the opinion of the Board assessable. This class includes such buildings as stable, blacksmith, machine and carpenter shops, store houses for other than ore, bunk houses, oil houses, dry and change houses, ice houses and offices. It is to be noted that while subsection (4) of

Section 40 opens with an enumeration in general terms of things—buildings, plant and machinery—used for two specified purposes, it closes with an enumeration of specific things—"concentrators" and "sampling plants". The class of buildings under consideration cannot fall under any of the things in the general enumeration in view of the limited purposes set out. If the Legislature had intended to exempt this class of building it would have enumerated them specifically along with "concentrators and sampling plant", but this it has not done. The fixed equipment in blacksmith, carpenter and machine shops may perhaps, though near the line, be regarded as fixed machinery used for manufacturing purposes, and as such exempt in toto, while the fixed equipment, if any, in the other buildings of this class is assessable as partaking of the nature of land as land is defined in "The Assessment Act." In the foregoing when the term "mine" is used the reference is to the "buildings, plant and machinery in, on or under mineral land and used solely for obtaining minerals from the ground."

Where an apportionment of valuations requires to be made in accordance with the findings of the Board, the parties indicated that such apportionment could be made by agreement. Before adopting the valuations appearing in the statements furnished the municipality by the several companies the provisions of subsections (2) and (3) of Section 40 of "The Assessment Act" should be considered. The Board understands that the valuations appearing in these statements are the cost values of the several structures as carried on the books of the companies. It may well be that in many cases the cost at which a structure is carried on the books of the Company is quite different from the "amount by which the value of the land is * * * * * increased" by the erection of the structure.

The appeals will be allowed and the several assessement rolls amended in accordance with the foregoing. There will be no costs to either party. There will be a fee of $10.00 in Law Stamps on each Order payable by the appellant the appellant in each case being recouped $5.00 by the respondent.

(Sgd.) **D. M. McIntyre,**
Chairman.

Dated at Toronto the 22nd Day of January, A.D. 1920.

Procedure File 5514

Between:

Dome Lake Mining & Milling Co. Ltd.
Appellants,

—and—

Chas. B. Morgan, and Chas. V. Gallagher,
Respondents.

(Assessment Appeal—Township of Tisdale)

Jan. 22nd Judgment delivered allowing appeal. (See P. F. 5513).

June 12th. Order issued.

May 28th, 1920.

—Order—

Upon application by the appellants unto this Board by way of appeal from the decision or order of the Junior Judge of the District Court of the District of Temiskaming, allowing an appeal by the respondents from the decision of the Court of Revision of the Township of Tisdale in respect of the assessment of the appellants for the year 1919, the said application coming on to be heard before the Board at South Porcupine on the 9th, 10th and 11th days of December, 1919, in the presence of counsel for the appellants and for the respondents, when judgment was reserved and coming on this day for judgment.

1. The Board doth order that the said appeal be and the same is hereby allowed in part.

2. The Board doth further order that the Assessment Roll of the Township of Tisdale for the year 1919 be amended by inserting as the assessable value of the items assessed under the description of Mill Buildings, Plant and Machinery of the appellants the sum of $2,207.50, in lieu of the sum entered therefor in the assessment roll.

3. The Board doth further order that the said assessment roll be further amended to conform to the requirements of subsection 1, Section 22 of The Assessment Act, in accordance with the return in that behalf made by the appellants under Section 16 of The Assessment Act.

4. And the Board doth further order that there be no costs of the appeal to either party and that the appellants pay a fee of Ten Dollars on this order and that the respondents do pay to the appellants one-half that amount.

(Sgd.) **D. M. McIntyre,**
Chairman.

(Seal)

Procedure File 5515

Between:

McIntyre Porcupine Mines, Ltd.
Appellants,

—and—

Chas. B. Morgan, and Chas. V. Gallagher,
Respondents

(Assessment Appeal—Township of Tisdale)

Jan. 22nd. Judgment delivered allowing appeal. (See P. F. 5513).

June 12th. Order issued.

May 28th, 1920.

—Order—

Upon application by the appellants unto this Board by way of appeal from the decision or order of the Junior Judge of the District Court of the District of Temiskaming, allowing an appeal by the respondents from the decision of the Court of Revision of the Township of Tisdale in respect of the assessment of the appellants for the year 1919, the said application coming on to be heard before the Board at South Porcupine on the 9th, 10th and 11th days of December, 1919, in the presence of counsel for the appellants and for the respondents, when judgment was reserved and coming on this day for judgment.

1. The Board doth order that the said appeal be and the same is hereby allowed in part.

2. The Board doth further order that the Assessment Roll of the Township of Tisdale for the year 1919 be amended by inserting as the assessable value of the items assessed under the description of Mill Buildings, Plant and Machinery of the appellants the sum of $43,850.00 in lieu of the sum entered therefor in the assessment roll.

3. The Board doth further order that the said assessment roll be further amended to conform to the requirements of sub-section 1, Section 22 of The Assessment Act, in accordance with the return in that behalf made by the appellants under Section 16 of The Assessment Act.

4. And the Board doth further order that there be no costs of the appeal to either party and that the appellants pay a fee of Ten Dollars on this order and that the respondents do pay to the appellants one-half that amount.

(Sgd.) **D. M. McIntyre,**

(Seal) Chairman.

Procedure File 5516

Between:

Dome Mines Co. Ltd.

Appellants,

—and—

Chas. B. Morgan, and Chas. V. Gallagher,

Respondents.

(Assessment Appeal—Township of Tisdale)

Jan. 22nd. Judgment delivered allowing appeal. See P. F. 5513).

June 12th. Order issued.

May 28th, 1920.

—Order—

Upon application by the appellants unto this Board by way of appeal from the decision or order of the Junior Judge of the District Court of the District of Temiskaming, allowing an appeal by the respondents from the decision of the Court of Revision of the Township of Tisdale in respect of the assessment of the appellants for the year 1919, the said application coming on to be heard before the Board at South Porcupine on the 9th, 10th and 11th days of December, 1919, in the presence of counsel for the appellants and for the respondents, when judgment was reserved and coming on this day for judgment;

1. The Board doth order that the said appeal be and the same is hereby allowed in part.

2. The Board doth further order that the Assessment Roll of the Township of Tisdale for the year 1919 be amended by inserting as the assessable value of the items assessed under the description of Mill Buildings, Plant and Machinery of the appellants the sum of $40,858.67 in lieu of the sum entered therefor in the assessment roll.

3. The Board doth further order that the said assessment roll be further amended to conform to the requirements of sub-section 1, Section 22 of The Assessment Act, in accordance with the return in that behalf made by the appellants under Section 16 of The Assessment Act.

4. And the Board doth further order that there be no costs of the appeal to either party and that the appellants pay a fee of Ten Dollars on this order and that the respondents do pay to the appellants one-half that amount.

(Sgd.) **D. M. McIntyre,**

(Seal)

Chairman.

Procedure File 5517

Between:

Porcupine Crown Mines, Ltd.

Appellants.

—and—

Chas. B. Morgan, and Chas. V. Gallagher,

Respondents.

(Assessment Appeal—Township of Tisdale)

Jan. 22nd. Judgment delivered allowing appeal. (See P. F. 5513).

June 12th. Order issued.

May 28th, 1920.

—Order—

Upon application by the appellants unto this Board by way of appeal from the decision or order of the Junior Judge of the District Court of the District of Temiskaming, allowing an appeal by the respondents from the decision of the Court of Revision of the Township of Tisdale in respect of the assessment of the appellants for the year 1919, the said application coming on to be heard before the Board at South Porcupine on the 9th, 10th and 11th days of December, 1919, in the presence of counsel for the appellants and for the respondents when judgment was reserved and coming on this day for judgment.

1. The Board doth order that the said appeal be and the same is hereby allowed in part.

2. The Board doth further order that the Assessment Roll of the Township of Tisdale for the year 1919 be amended by inserting as the assessable value of the items assessed under the description of Mill Buildings, Plant and Machinery of the appellants the sum of $1,800.00, in lieu of the sum entered therefor in the assessment roll.

3. The Board doth further order that the said assessment roll be further amended to conform to the requirements of sub-section 1, Section 22 of The Assessment Act, in accordance with the return in that behalf made by the appellants under Section 16 of The Assessment Act.

4. And the Board doth further order that there be no costs of the appeal to either party and that the appellants pay a fee of Ten Dollars on this order and that the respondents do pay to the appellants one-half that amount.

(Sgd.) **D. M. McIntyre,**
Chairman.

(Seal)

Procedure File 5518

Between:

Davidson Gold Mines, Ltd.
Appellants,

—and—

Chas. B. Morgan, and Chas. V. Gallagher,
Respondents.

Assessment appeal, Tp. Tisdale.

Jan. 22nd. Judgment delivered allowing appeal. (See P. F. 5513).

June 12th. Order issued.

May 28th, 1920.

—Order—

Upon application by the appellants unto this Board by way of appeal from the decision or order of the Junior Judge of the District Court of the District of Temiskaming, allowing an appeal by the respondents from the decision of the Court of Revision of the Township of Tisdale in respect of the assessment of the appellants for the year 1919, the said application coming on to be heard before the Board at South Porcupine on the 9th, 10th and 11th days of December, 1919, in the presence of counsel for the appellants and for the respondents, when judgment was reserved and coming on this day for judgment;

1. The Board doth order that the said appeal be and the same is hereby allowed in part.

2. The Board doth further order that the Assessment Roll of the Township of Tisdale for the year 1919 be amended by inserting as the assessable value of the items assessed under the description of Mill Buildings, Plant and Machinery of the appellant the sum of $2,485.00 in lieu of the sum entered therefor in the assessment roll.

3. The Board doth further order that the said assessment roll be further amended to conform to the requirements of sub-section 1, Section 22 of The Assessment Act, in accordance with the return in that behalf made by the appellants under Section 16 of The Assessment Act.

4. And the Board doth further order that there be no costs of the appeal to either party and that the appellants pay a fee of Ten Dollars on this order and that the respondents do pay to the appellants one-half that amount.

(Sgd.) **D. M. McIntyre,**
(Seal) Chairman.

Procedure File 5543

(See P. F. 4628)

Application by the Town of Capreol, under section 18 (2) of "The Municipal Act", for annexation thereto of part of the unorganized Township of Capreol.

March 23rd. Hearing, pursuant to appointment, 9.30 a.m., Court House, Sudbury. Application dismissed.

Procedure File 5558

Between:

The Municipal Corporation of the Township of Bucke,
Appellant,

—and—

The Nipissing Central Railway Co., Ltd.
Respondent.

(Assessment Appeal)

Jan. 8th. Hearing, 10.30 to 11.50 a.m. Appeal dismissed.

Procedure File 5562

Between:

The Municipal Corporation of the Town of Dundas
Applicant,
—and—

The Dominion Natural Gas Co., Ltd., and F. F. Fry, Ltd.,
Respondents.

(Re location of Gas Mains, etc., in Town of Dundas)

Jan. 16th. Hearing, 11 a.m. to 12 pm., at Court House, Hamilton. Judgment that Board has no jurisdiction.

Procedure File 5563

Application by The South Bruce Rural Telephone Co., Ltd., under section 88 of 'The Ontario Telephone Act, 1918", for authority to increase its charges for telephone service.

March 11th. Hearing, pursuant to appointment, 2.30 to 4.30 p.m., Town Hall, Mildmay.

March 22nd. Order.

—Order—

March 22nd, 1920.

Upon the application of the above named applicant, upon reading the Report of D. M. McIntyre, Esquire, K.C., Chairman, who heard the evidence adduced on behalf of all parties, Statements of Assets and Liabilities, Receipts and Disbursements, and other material filed.

The Board orders that the applicant, The South Bruce Rural Telephone Company, Limited, be authorized to charge the following rates for rural party line service, to take effect as from the first day of January, A.D. 1920.

To Shareholders	$ 9.00 per annum
To persons other than Shareholders	13.00 per annum

These charges to include the cost of battery renewals.

And it is further ordered that no part of the monies received by applicant in payment for shares of capital stock shall be expended upon management, maintenance or operation, but such monies shall be devoted to meet the cost of new construction and extensions to the system.

And the Board makes no order for costs, save and except that the applicant shall pay $10.00 for the Law Stamps required for this order.

(Sgd.) **D. M. McIntyre,**
(Seal) Chairman.

Procedure File 5572. P. 319

Between:

The Corporation of the City of Sarnia,

Applicant,

—and—

The Sarnia Street Railway Co.,

Respondent.

(As to grade and condition of tracks and expense of grade crossing)

April 16th. Plan and profile shewing grade of streets, filed as directed.

Oct. 20th. Hearing continued, pursuant to appointment, 10 a.m. to 11.30 a.m., Council Chamber, City Hall, Sarnia. City to furnish Board and Company (within 2 weeks) with linen tracings of cross sections and written statement of bench marks. Company then to have 10 days to consider and object or approve, and to notify the Board accordingly. If not approved by Company to be settled by Board's Engineer. (See Reporter's Notes).

Oct. 25th. Supplementary Order issued.

—Order—

October 20th, 1920.

In Supplement of the Board's Order of the 5th day of December, A.D. 1919:

The Board orders that the applicant prepare cross sections of the several streets of the applicant along which the railway of the respondent is laid, such cross sections to be in general conformity with the recommendation contained in the letter of H. W. Middlemist, Esquire, the Engineer of the Board, annexed to the said order of the Board and dated 3rd September, 1919; such cross sections to be made at intervals of 50 feet, and to be completed and furnished to the respondent company and the Board within two weeks from date; the respondent company within ten days after receiving such cross sections shall signify to the Board and the applicant whether or not the respondent accepts and adopts said cross sections as correct, and if not in what respects the respondent objects to said cross sections; in the event of the respondent failing to file objections within such period such cross sections shall be adopted by the Board as final and conclusive; in the event of the respondent signifying to the Board its objections to such cross sections the cross sections and the respondent's objections shall be referred to the Board's said engineer for enquiry and report.

Further directions are reserved pending the final determination of this application.

(Sgd.) **D. M. McIntyre,**

(Seal)

Chairman

Procedure File 5574

Between:

The Canadian National Railways,

Appellant,

—and—

The Corporation of the Town of Capreol,

Respondent.

(Assessment Appeal)

Jan. 6th. Letter received advising settlement arrived at between parties.

March 11th. Approved draft order filed.

March 11th. Order issued.

—Order—

March 11th, 1920.

The appeal of the Canadian National Railways against their assessment in the Town of Capreol having come before this Board on the 15th day of December, A.D. 1919, in the presence of the representative of the Canadian National Railways and the solicitor of the Town of Capreol, after hearing what was alleged by the representatives of both parties, this Board was pleased to adjourn the hearing until a later date to be fixed at the Town of Capreol, and it since appearing that a settlement has been arrived at between the parties in the lines hereinafter set forth.

1. This Board doth hereby confirm the settlement arrived at between the parties, which settlement is as follows:

(a) For Number 250 on the Assessment Roll of 1918, being an assessment of $100,000.00 against the Eastern Lands Company for the year 1918, there be substituted an assessment of $45,000.00 against the Canadian National Railways.

(b) That the assessment as hereinafter fixed for the year 1919 shall be the amount for which the Canadian National Railways shall be assessed in the Town of Capreol for the next following four years in respect of the land and the property included in such assessment, as provided in section 48 of the Assessment Act, and that the assessment for the year 1918 be not regarded as the commencement of the quinquennial period by reason of defects in said assessment.

(c) That the assessment of the Canadian National Railways' land and property in the Town of Capreol for the year 1919 be fixed at $135,700.00, said assessment to cover

1. The following lands, namely,—

Right of way and yards through lots 10, 11 and 12 in what was formerly the sixth concession on the Township of Capreol, comprising 182.72 acres.

2. The following buildings,—

Station
Boarding-House
2 Bunk Houses
Loco. foreman's dwelling
Roundhouse and machine shop
Water tank
Section house
Store-house
Tool-house
Closets
Ice-house
Freight-house
Lumber storehouse
Carpenter's shop B. & B. Dept.
Supervisor's bunk-house
Tool-house
Carpenter's shop (car repairers)
Garage
Stockyard
Car Shop and Planing Mill
Coal Platform
Stockyard
Pumphouse
Coaling Plant
Warehouse
Sandhouse
20 Box cars used as dwellings.

3. The land assessment in number 457 on the Assessment Roll for 1919 being an assessment against the Canadian Northern Realties for $3,200.00, which assessment is hereby made against the Canadian National Railways.

(d) That the said assessment as fixed as aforesaid for 1919 take the place of the assessment made by the assessor of the Town of Capreol for the year 1919, and shown as numbers 449 to 457 inclusive, and numbers 119, 36 and 459 on the assessment roll.

(c) That the assessment roll of the Town of Capreol be amended as aforesaid.

(Sgd.) **D. M. McIntyre,**
Chairman.

(Seal)

Procedure File 5591

In the matter of the petition of E. McMahon and F. A. Magee (owners of land in question) against the construction of a five foot concrete sidewalk on Blackburn Avenue West, between Templeton Street and Somerset Street in the City of Ottawa, as a Local Improvement.

Jan. 2nd. Hearing at Ottawa, 11 to 11.45 a.m., adjourned 'sine die', City to have liberty to bring on again at any time on notice to petitioners.

Procedure File 5592.

Application of Robt. Brigham, under section 88 of "The Ontario Telephone Act, 1918", for authority to increase charges for telephone service.

Jan. 17th. Order.

—Order—

January 17th, 1920.

Upon the application of the above named applicant, upon reading the report of D. M. McIntyre, Esquire, K.C., Chairman, who heard the evidence adduced on behalf of all parties, statements of assets and liabilities, receipts and disbursements, and other material filed,

The Board orders that the applicant be authorized to charge the following rates for telephone service, to take effect as from the first day of January, A.D. 1920:

To subscribers purchasing their own telephones	$12.50 per annum
To subscribers for whom applicant furnishes all equipment..	$15.00 per annum

And the Board further orders

(1) That the applicant shall immediately after the close of the present winter season thoroughly overhaul the poles and wires comprising his telephone system, remove all defects therefrom and execute such repairs and renewals as may be necessary to render possible the furnishing of an uninterrupted and efficient service to the subscribers.

(2) That applicant shall cause to be made periodical inspection, at intervals not exceeding six months, of each subscriber's station for the purpose of ascertaining that the equipment of such station is in a condition to render efficient service, and of executing such repairs as may be necessary, including the renewal of batteries.

(3) That the applicant shall keep on file a record of written complaints as to service which may be received by him from time to time, and such record shall include particulars of the date received, cause of complaint, what done to remove trouble and date removed.

And the Board makes no order for costs, save and except that the applicant shall pay $10.00 for the law stamps required for this order.

(Sgd.) **D. M. McIntyre,**
(Seal) Chairman.

Procedure File 5601.

Application by The Monk Rural Telephone Co. Ltd., under section 88 of "The Ontario Telephone Act, 1918", for authority to increase charges for telephone service.

Feb. 3rd. Hearing, pursuant to appointment, 2 to 5.15 p.m. Judgment reserved.

Aug. 4th. Order.

August 4th, 1920.

—Order—

Upon the application of the above-named applicant, and upon reading the report of Donald M. McIntyre, Esq., K.C., Chairman, who heard the evidence adduced on behalf of all parties, statements of assets and liabilities, receipts and disbursements, and other material filed.

The Board orders, subject to the several conditions prescribed in this order, that leave be granted to the applicant to charge the undermentioned tariff charges for telephone service, to take effect as from November 1st, 1919:

For Rural Party Line Service:	
To Shareholders	$15.00 per annum
To Non-Shareholders	$27.00 per annum
For Individual Line Service:	
To Shareholders	$22.50 per annum
To Non-Shareholders	$34.50 per annum

And the Board further orders

.1 That for the purpose of providing a fund to meet the cost of the renewal of its plant and equipment, the applicant shall on December 31st, 1921, and each year thereafter set aside out of its earnings a sum equal to not less than five per cent. of the total value of the plant and equipment used in the applicant's business on December 31st in each year. The fund so provided shall, unless otherwise authorized by the Board, be applied exclusively to the cost of renewing such portion of the said plant and equipment as may from time to time be rendered necessary by depreciation or obsolescence, and after deducting therefrom such amounts as may have been so expended in any one year the residual amount shall be deposited in a chartered bank at interest and the money so deposited may, with the approval of the Board, be expended in new construction, or extensions or additions to the property of the company, or, with the like approval, may be invested in interest-bearing securities; and all interest accruing from any portion of the depreciation fund so deposited or invested, and such portion of the earnings fixed by the Board as attributable to the moneys so expended in new construction, extension or additions shall from time to time be carried to the credit of the said fund.

2. That the applicant shall on or before the fifteenth day of January in each year, furnish the Board with a report setting forth: (a) The total amount standing at the credit of the fund referred to in clause 1 hereof on the 31st

day of December in the preceding year; (b) the amount of such fund which has been temporarily used in the purchase of securities; (c) the names and values of the securities so purchased, together with (d) a certified statement from the bank in which the fund is deposited, showing the amount standing at the credit of such fund on the last named date.

3. That the applicant shall keep separate records of all expenditures upon the construction, operation, maintenance and renewal of its plant and equipment and shall each year furnish the shareholders with an annual report and balance sheet in the form approved of by this Board as set forth on pages 141 to 144 of "Telephone Systems, 1919".

And the Board makes no order for costs, save and except that the applicant shall pay $10.00 for the law stamps required for this order.

(Sgd.) **D. M. McIntyre,**
(Seal) Chairman.

Procedure File 5611.

Application by Joseph A. St. Louis, owner, under "The Planning and Development Act", for approval of plan of part Farm Lot 115 (McNiff's Survey) Con. 1, Township Sandwich East, County Essex.

Jan. 7th. Hearing, pursuant to appointment, 10.30 to 11 a.m., at Board's Chambers. Adjourned to 19th inst., at 11 a.m. Plans and affidavits to be filed shewing location and distances and probability of annexation to Walkerville and layout of nearest area of Walkerville. (See Reporter's Notes).

Jan. 19th. Hearing continued, 11 to 11.30 a.m. Adjourned to 11 a.m., Feb. 3rd, Council Chamber, Windsor.

Feb. 3rd. Hearing, continued, pursuant to adjournment, 11 to 11.30 a.m. Judgment reserved.

Feb. 25th. Judgment approving plan. Plan certified accordingly.

Procedure File 5615. (P. 316)

In the matter of the petition of J. A. Millen, et al, under section 21 of "The Municipal Act", for annexation to the City of Hamilton of part of the Township of Barton.

Jan. 16th. Counsel for city speaks to matter before Board at Hamilton. 11 a.m., 10th Feb., 1920, at Council Chamber, City Hall, Hamilton, fixed for hearing.

Feb. 10th. Hearing, pursuant to appointment, 11 a.m. to 12.45 p.m. Board directs affidavits by witnesses to petitions to be filed (see Reporter's Notes) Firestone Company's rights to be preserved (see Reporter's Notes). Chairman will report to Board. Order to be drafted by Mr. Waddell and approved by other Counsel.

March 18th. Order

March 18th, 1920.

—Order—

Upon the application of the above mentioned petitioners, and upon reading the petition of the applicants herein filed with the Board, and the resolution of the Council of the Corporation of the City of Hamilton passed on the 9th day of December, 1919, declaring the expediency of such annexation upon the terms mentioned in said resolution, and upon hearing representatives of the said petitioners and what was alleged by counsel on behalf of the Corporation of the City of Hamilton, the Township of Barton and the County of Wentworth, the Firestone Tire and Rubber Company of Hamilton, Limited, and the Board of Education of the City of Hamilton.

This Board doth order and proclaim that the portion of the Township of Barton, in the County of Wentworth, described as follows:—All and singular that certain parcel or tract of land and premises situate lying and being in the Township of Barton in the County of Wentworth in the Province of Ontario, being composed of the whole of lots one and two in the Broken Front and First Concessions, and the southerly parts of lots three and four in the First Concession. The whole of lots one and two and the southerly parts of lots three and four in the Second Concession, and the northerly parts of lots one, two, three and four in the third concession of the said Township of Barton, and which may be more particularly described as follows, that is to say, commencing on the boundary line between the said Townships of Barton and Saltfleet at a point one hundred feet (100′) south of the northerly limit of the third concession, or the southerly limit of Main Street; thence westerly along a line one hundred feet (100′) south of the southerly limit of Main Street, where parts of the township lots are unsubdivided, and along the southerly limits of lots fronting on Main Street, where subdivisions occur, to a point one hundred and fifty feet (150′) east of Ottawa Street; thence northerly parallel with the easterly limit of Ottawa Street, to the southerly limit of the Hamilton Waterworks Pipe-Line Right-of-Way; thence north-easterly along the southern limit of the Hamilton Waterworks Pipe-Line Right-of-Way to the eastern limit of Kenilworth Avenue. Thence northerly along the eastern limit of Kenilworth Avenue, to the northern limit of Barton Street. Thence westerly along the northern limit of Barton Street to the eastern limit of Ottawa Street. Thence northerly along the eastern limit of Ottawa Street to the southern limit of the Right-of-Way of the Grand Trunk Railway Company (Main Line). Thence easterly along said southerly limit of the railway Right-of-Way to the western limit of Kenilworth Avenue. Thence northerly along the western limit of Kenilworth Avenue, to Hamilton Harbor (formerly Burlington Bay). Thence easterly along the margin of Hamilton Harbor to the boundary line between the townships of Barton and Saltfleet. Thence southerly along the said line between the Townships of Barton and Saltfleet to the place of beginning, all of which is more particularly shown on the accompanying plan, be and the same is hereby annexed to the City of Hamilton; the said annexation shall take effect upon and subject to the following terms and conditions, namely:—

1. (a) That the taxes, assessments, rents, water, school and other rates (with the exception of local improvement rates, hereinafter mentioned),

to be levied by the City of Hamilton in respect of the said territory, shall for the year 1920 and thereafter, be the same, and payable at the same time and in the same manner as taxes, assessments, rents, water, school and other rates, levied and raised from time to time on the property within the old boundaries of the City as they existed on the 1st day of January, 1921, and the assessment of the said territory by the said City, shall for the year 1920 and thereafter, be on the same basis and made at the same time and in the same manner as in the said old boundaries of the City, except that the assessment by the Corporation of the City of Hamilton of the said territory for the year 1920 may be taken by the City Assessors at any time during such year. The Township of Barton shall at all reasonable times allow the Corporation of the City of Hamilton, its servants and agents, access to the Assessment Rolls of the said portion of the said Township of Barton, and to all local improvement by-laws and local improvement assessment rolls, and also all plans, surveys and maps applicable to the said portion of the said Township for the purpose of making copies of the same.

(b) The City of Hamilton shall pay to the Township of Barton on the 31st day of Decembr, 1920, an amount equal to twenty-five per centum of the amount of the general taxes levied and collected by the City of Hamilton in respect of the annexed area, and the township shall pay out of the said amount the sum which the County of Wentworth and the several school sections affected shall be entitled to be paid respectively in respect of the first three months of the year 1920, and in any arbitration between the City, the Township of Barton and the County of Wentworth, the Arbitrator or Arbitrators may take into consideration the payment made or to be made under this paragraph.

(c) That the Corporation of the Township of Barton shall forthwith prepare and furnish to the Corporation of the City of Hamilton a special roll showing all arrears of taxes or special rates assessed against the lands above described up to the thirty-first day of December, 1919, and the persons assessed therefor.

(d) That the Corporation of the City of Hamilton shall have the right to collect all said arrears of taxes according to said special roll including the right to distrain for non-payment of said arrears, or if necessary the right to sell the said lands, if any, for non-payment of such arrears, as fully as if the said taxes had been assessed and levied by such corporation, but the proceeds of the collection of such arrears or any part of same, after deducting therefrom the proper costs and expenses in connection with the collection of same shall be repaid by the Corporation of the City of Hamilton to the said Corporation of the Township of Barton within six months from the date of collection provided that the said Corporation of the City of Hamilton shall proceed to collect the said arrears of taxes shown on said special roll, in the same way as if it had assessed and levied the same, but shall not be responsible to the Corporation of the Township of Barton for any of such arrears of taxes which it may be unable to collect.

(e) That the Corporation of the Township of Barton shall indemnify and save harmless the Corporation of the City of Hamilton from all loss, costs, charges and expenses arising from any act or omission of the Township of Barton or their officials or servants in connection with the said special roll.

2. (a) In the district so added to the City the opening, widening, extending, grading, altering the grade of, diverting, macadamizing, paving, and improving of streets and alleys, the opening of new streets, the construction, enlarging and extending sewers, the construction of curbing and sidewalks upon or along any street or alley, shall be constructed as local improvements and the entire cost of all such works undertaken shall be borne by the property owners and specially assessed upon their lots pursuant to the terms of The Local Improvement Act, with the exception of the reductions and the corporation's portion of the cost which the said Act provides shall be paid by the Corporation.

(b) In the district so added the cost of the reduction and the Corporation's portion of the cost which the said Act provides shall be paid by the Corporation, mentioned in the preceding subsection, and also the cost of gulley drains shall be borne at large by the said annexed district and the City shall annually or otherwise, levy and raise by a special rate on the whole ratable property in the said district, over and above all other rates and taxes an amount sufficient to pay the cost of such reductions and the Corporation's portion of the cost and the cost of gulley drains herein mentioned.

3. (a) The City shall construct a system of sewers in the said district at such time and times as may be deemed expedient by the City Council and the lands in the said district shall be assessed for the total cost of all main and trunk sewers constructed in each district, provided, however, should any of such main or trunk sewers be constructed of sufficient capacity and for the purpose of draining other territory than the district annexed, the lands hereby annexed shall be charged only with their proper share of such cost which shall be determined by the said Council, subject to an appeal to this Board.

(b) The Council of the Corporation of the City of Hamilton may from time to time pass by-laws without submitting the same to the electors qualified to vote on a money by-law, for raising the amounts required to pay the cost of the said main and trunk sewers, over and above the amounts that may be assessed against the lands abutting thereon for the owners' portion of the cost of the said main and trunk sewers, and may issue debentures of the City Corporation from time to time for such required amounts payable at the end of ten years from the time such debentures are issued.

(c) During the currency of any such debentures the City shall annually levy and raise by a special rate on the whole ratable property in the said district, over and above all other rates and taxes, an amount sufficient to pay the proportionate amounts of the said debenture debts and interest chargeable to the said districts.

4. Where any work has heretofore been constructed in the said district and such work is defective or insufficient the Corporation of the City of Hamilton may proceed with the construction of required works under the provisions of The Local Improvement Act notwithstanding the lifetime of the first mentioned work has not expired.

5. The residents of the district to be annexed shall be entitled to water from the Hamilton Water Works upon the same terms and conditions as the residents of Hamilton.

6. And this Board doth further order and declare that the application of the Council of the Corporation of the Township of Barton to the Legislative Assembly of the Province of Ontario for confirmation and validation by a Special Act of By-law ..o. 1192 of the Council of the Corporation of the Township of Barton shall not be prejudiced or affected by this Order, and leave is reserved to the Council of the Corporation of the Township of Barton to proceed with its application for such Special Act and this Order is made upon and subject to the condition that the application of the Council of the Corporation of the Township of Barton for a Special Act confirming and validating the said By-law No. 1192 shall not be opposed by the Municipal Corporation of the City of Hamilton and if said By-law No. 1192 shall be confirmed and validated by the Legislative Assembly of the Province of Ontario then all rights, privileges and evemptions and the fixed assessment provided for by said By-law No. 1192 of the Council of the Corporation of the Township of Barton respecting the assessment of parts of Lots One and Two in the First and Broken Front Concession of the Township of Barton for a period of twenty years and an Agreement annexed to the said By-law as approved and confirmed by the Legislative Assembly of the Province of Ontario shall be and continue in force in accordance with the terms and conditions therein contained; provided that such By-law shall not exempt the lands affected thereby from assessment and taxation for school purposes and local improvements.

7. The said annexed territory shall form part of Ward No. 8 of the said City.

8. The provisions of Section 38 of "The Municipal Act" shall apply as between the municipalities affected by this Order.

9. The Order shall come into force on the 1st day of April, 1920.

(Sgd.) **D. M. McIntyre,**
Chairman.

(Seal)

PROCEDURE FILE 5621.

Between:

The Municipal Corporation of the City of Windsor,

Appellant,

—and—

The Essex Border Utilities Commission,

Respondent.

(Appeal from Report of Morris Knowles, Ltd., dated July 2nd, 1919, re waterworks System of City of Windsor).

Jan. 5th. Reply of the Essex Border Utilities Commission filed.
Reply of Town of Sandwich filed.
Reply of Town of Walkerville filed.

Feb. 3rd. Hearing, pursuant to Appointment, City Hall, Windsor.
Adjourned to Monday, Mar. 1st, 1920, at 11 a.m., at Board's Chambers. (See Reporter's Notes).

Mar. 8th Hearing (arranged for 9th inst.) cancelled, Agreement having been arrived at between Parties.

PROCEDURE FILE 5624.

Application by the Commissioners for the Kerns Municipal Telephone System, under Section 88 of "The Ontario Telephone Act, 1918," for authority to increase charges for telephone service.

May 20th. Order.

May 20th, 1920.

ORDER.

Upon the application of the above named applicants, upon hearing the evidence adduced on behalf of all parties, upon reading statements of assets and liabilities, receipts and disbursements, and other material filed,

The Board orders that the applicants, the Commissioners for the telephone system of the Municipality of Kerns, be authorized to charge the following rates for telephone service:

To Subscribers:

For Principal and Interest	$10.20 per annum.
For Maintenance	9.80 per annum.
To Persons not being subscribers within the meaning of Sub-section (g) of Section 2 of "The Ontario Telephone Act, 1918"	$20.00 per annum.

Said charges to apply for the year 1920.

And the Board makes no order for costs, save and except that the applicants shall pay $10.00 for the law stamps required for this Order.

I concur. (Sgd.) D. M. McINTYRE,
(Sgd.) J. A. ELLIS. Chairman.
(Seal)

PROCEDURE FILE 5635
(See P.F. 5655)

Application under section 87 of "The Ontario Telephone Act, 1918," for approval of By-law No. 772 of the Township of Caledon, confirming the purchase of telephone plant and equipment from The Consolidated Telephone Company, Limited.

Feb. 6th. Hearing, pursuant to Appointment, 10.30 a.m., Court House, Orangeville.

Feb. 23rd. Opinion of the Board and Order issued dismissing the application, and refusing to approve of the Sale.

Re Appeal to Appellate Division—See 18 O.W.N., 248, 401.

June 11th. Notice of Appeal filed.

July 19th. Company's Appeal dismissed—18 O.W.N., 401.

PROCEDURE FILE 5655.

In the matter of:
The Consolidated Telephone Company, Limited,
Application of the Township of Caledon for Approval of
By-law No. 772;
—and—
In the matter of:
The Consolidated Telephone Company, Limited,
Application of the Township of Erin for Approval of
By-law No. 17.

Opinion of the Board

The Chairman having been authorized by the Board to report to the Board upon the matters arising upon this Application, he attended at the Town of Orangeville on the 6th and 13th days of February, instant, on notice to all parties in interest, and heard what was adduced in evidence by the parties, and by way of argument. The Chairman thereupon verbally intimated that he had reached the conclusion for reasons then disclosed to report to the Board that the agreement of sale in question should not be approved by the Board, and the Chairman further intimated that before reporting to the Board his conclusion as above he would consider certain objections in law raised by Mr. Wegenast, acting on behalf of the Consolidated Telephone Company.

Mr. Wegenast contended that the Board had not an uncontrolled judiciat discretion to give or withhold its approval to the sale in question, and that whatever the scope of its discretion in the premises the Board could no- withold its approval on the grounds intimated by the Chairman at the conclusion of the hearing; namely that the Councils of the Municipalities cono cerned being trustees for the intended subscribers of the proposed municipal telephone system were bound to take "all these precautions " (in managing this trust affair) "which an ordinary, prudent man of business would take in managing his own;" that failing in their duty in that behalf the transaction of purchase entered into by the municipal councils, and of which approval is now sought, is improvident and would impose an unreasonable burden on the intended subscribers of the proposed municipal telephone systems in the amount of the purchase price fixed, and in the onerous rates required to carry on the systems afterwards.

Mr. Wegenast's contention is that on the facts of this case the Board cannot withold its consent on the ground that the bargain is a bad one from the point of view of the municipalities, as that in effect would be an attempt to force the Company to take less for its property than the sum at which it was valued by the appraiser appointed by the municipalities. Mr. Wegenast seems to have overlooked that this is not the only alternative as the company is at liberty to take back its plant and return the purchase money to the municipalities; the contract of sale having fallen through.

Very wide powers are vested in the Board by "The Ontario Telephone Act" (8 Geo. V, c. 31), sections 102 and 104, read thus:

> "102. The Board shall superintend the carrying out of this Act and, for that purpose, shall have and may exercise all necessary powers and authority over and in respect of any person, company, municipal corporation or Board of Commissioners."
>
> "104. The Board may, upon request and on such terms as seem expedient, assist by advice any company, municipal corporation, the Commissioners for any system and resident assessed landowners as to the establishment, extension, maintenance and operation of any system or works authorized by this Act and the proceedings incidental thereto."

In addition to those general powers, specific powers are conferred on the Board by a score or more sections so that in the result a compliance with the Act requires that the development step by step of a municipal telephone system shall from its inception be minutely supervised and controlled by the Board. Of these specific powers these apposite in this case are contained in the following sections of the Act:

> "24. By agreement with the owner the initiating municipality may, with the approval of the Board, acquire by purchase any existing telephone system operated in the municipality or any portion thereof, and

also any part of such system situate in another municipality with the consent of the Council of each other municipality, and failing such consent with the approval of the Board."

> "87. No Company shall sell or transfer its system or a controlling interest in it to any person or Company, or amalgamate with any Company or system, or enter into an agreement which shall, in effect, transfer the ownership or control of the system of such first named company to any other Company, whether such other Company is within the jurisdiction of the Legislature of the Province of Ontario or not, until the Board has approved such sale, transfer, amalgamation or agreement."

By section 5, subsection (4) of the Act (R.S.O., cap. 186) constituting the Board, it is declared that the Board shall have all the powers of a Court of Record. Section 107 of "The Ontario Telephone Act"(omitting as irrelevent Paragraphs (a) and (b) reads thus:

> "107. The Board shall have jurisdiction to enquire into, hear and determine any application by or on behalf of any person interested;
>
> (e) requesting the Board to make any Order, or give any direction sanction or approval which by law it is authorized to make or give."

In view of the foregoing the proper conclusion seems to be that the Board has jurisdiction to entertain the application, and has a discretion in exercising its powers in the premises, and that the Board is not bound, as suggested by Mr. Wegenast, to exclude from consideration as a determining factor the price agreed upon by the contracting parties. The authorities cited against the exercise of such a discretion do not seem to conclude the matter. In the Enlish case cited (Julius v. Lord Bishop of Oxford V., A.C. 214), the Bishop of Oxford was held to have a discretion to exercise or not exercise a power conferred on him by the enacting words "It shall be lawful." In that case,. after referring at some length to the authorities in which mandamus had issued, and amongst them to the case Macdougall v. Paterson, in which occurs the dictum of Chief Justice Jarvis, cited by Mr. Wegenast, Lord Penance says: "In all these instances the Courts decided that the power conferred was one which was intended by the Legislature to be exercised; and that although the Statute in terms had only conferred a power, the circumstances were such as to create a duty. In other words the conclusion arrived at by the Courts in these cases was this—that regard being had to the subject matter —to the position and character of the person empowered—to the general objects of the statute—and above all to the position and rights of the person or class of persons for whose benefit the power was conferred, the exercise of any discretion by the person empowered could not have been intended. * * The question then arises whether in the present case there are any considerations sufficiently cogent to exclude the idea that the Legislature intended a discretion. After an analysis of the enactment he states his conclusion that the Bishop had a discretion in these words: "The conclusion, then, at which I arrived is, that the Appellant has not established his case. The words "it shall be lawful" are permissive and enabling only. It devolved upon him to show that the Legislature intended the exercise of the power, then conferred, to be a duty, in the performance of which the Bishop was not intended to have any discretion, and he has, in my opinion, failed to show it."

The conclusion from this seems obviously to be that it depends on the circumstances of each particular case whether enabling words which vest power in a person or tribunal give rise to a duty enforceable by mandamus The general jurisdiction conferred on the Board by section 103 of "The Ontario Telephone Act to superintend the carrying out of the Act, and for that purpose to have and exercise all necessary powers and authority over and in respect of any person, company, municipal corporation or Board of Commissioners seems to vest in the Board a discretion limited only by the express provisions of the Act. Section 24, which requires the approval of the Board to a purchase of the kind in question here, places no express limitations upon the discretion of the Board to approve or withhold its approval. Besides this there is a class of persons vitally interested in the success of the proposed municipal telephone systems whose success will be conjectural if the sale goes through, and these are the Petitioners for the establishment of the systems. These Petitioners have to the number of some 150 from the Township of Caledon, and of some 40 from the Township of Erin, applied to the Board to have their names struck off the Petition on various grounds. These latter applications have not as yet been heard, though counsel for the Applicants attended at the sittings on the 6th and 13th February instant. These numerous applications are symptomatic of the widespread dissatisfaction at the proposed purchase on the part of the very persons whose support is essential to the success of the proposed municipal systems. The Board has a duty to protect this large class of interested persons (who are otherwise remediless) from the consequences of this improvident bargain. The Board has not refused to hear and determine the applications but has functioned in that it has through the Chairman held two all-day sessions at which the transaction was exhausteively considered, and as a result the conclusion reached is that approved should be withheld.

The disposition of the matter proposed at the hearing seems amply supported by authority as a reference to Smith v. Chorley Rural Council (1897),1 K.B. 678, will show. "In this case" (quoting the words of the Master of the Rolls), "the defendants were a local authority who had power to approve or disapprove plans relating to houses proposed to be erected in their district. The plaintiff submitted plans of proposed houses to the defendants, whose duty was not merely ministerially to put "approved" or "disapproved" on the plans, but to determine whether they would or would not approve them." At p. 680, Lord Justice Lopes says: "Many points have been argued in this case; but the one we have to deal with is this. Plans were laid before the District Council, who did not refuse or neglect to consider them, but, exercising their discretion, they disapproved of them, thinking that the street in which the houses were to be built was a new street. The rule applicable to such a case is that the exercise of the discretion of a tribunal, however erroneous it may be, upon a question within its jurisdiction and when honestly exercised cannot be questioned. Any other conclusion would lead to this—that though the Legislature has entrusted to a local tribunal a discretion as to a particular matter which they consider, and as to which they honestly exercise their discretion, still the Court could direct them to exercise their discretion in a different way—a result which in my opinion would be absurd."

The Chairman is of the opinion that the Board has a discretion in the exercise of its power to approve or disapprove of the proposed purchase and sale upon the grounds intimated at the hearing, and he will report to the Board recommending that the purchase and sale be not approved.

(Sgd.) D. M. McIntyre,
Chairman.

Dated at Toronto the 23rd day of February, A.D. 1920.

In the matter of:

The Consolidated Telephone Company, Limited,

Application of the Township of Caledon for approval of By-law No. 772;

—and—

In the matter of:

The Consolidated Telephone Company, Limited,

Application of the Township of Erin for approval of By-law No. 17

The Ontario Railway and Municipal Board having received applications in these matters for approval of By-law No. 772 of the Township of Caledon and of By-law No. 17 of the Township of Erin, did appoint Friday, 6th February, 1920, at half past ten o'clock in the forenoon at the Court House in the Town of Orangeville for the hearing of the Applications.

Pursuant to the provisions of Section 9 of "The Ontario Railway and Municipal Board Act" (R.S.O., Chapter 186), and to the provisions of Section 105 of "The Ontario Telephone Act, 1918 (8 George V, Chapter 31), the Board did authorize, appoint and direct Donald Malcolm McIntyre, Esquire, K.C., the Chairman of the Board, to examine and report to the Board upon the said applications, and any questions or matters arising in connection with the same, and the said Donald Malcolm McIntyre, Esquire, did, pursuant to such authorization, appointment and direction, attend at the said time and place and at a subsequent adjournment of said appointment to Friday, 13th February, 1920, at the same hour and place, and did hear what was alleged by the parties and what was tendered in evidence.

That the said Donald Malcolm McIntyre, Esquire, did in writing under date , 23rd February, A.D. 1920, report to the Board upon the said applications, and upon the questions and matters arising in connection with the same, and the said Report was adopted by the Board as the Order of the Board, and as the basis of the Board's Order herein.

I certify that the foregoing is a true statement of the proceedings in the above matters.

(Sgd.) D. M. McIntyre,

Chairman.

Dated at Toronto the 1st day of June, 1920.

(Seal)

In the matter of:

The Consolidated Telephone Company, Limited,

Application of the Township of Caledon for approval of By-law No. 772;

—and—

In the matter of:

The Consolidated Telephone Company, Limited,

Application of the Township of Erin for approval of By-law No. 17.

The Report herein of Donald Malcolm McIntyre, Esquire, having been made in writing under date 23rd February, A.D. 1920, the same was filed, and the said Report was considered by a quorum of the Board composed of the Chairman and Vice-Chairman (James A. Ellis, Esquire, the third member of the Board being then ill), and the same was after consideration, and without notice to the parties, or further argument, adopted as the basis of the Board's Order herein.

At the written request of F. W. Wegenast, Esquire, in supplement of my former certificate, I certify that the foregoing truly sets out the proceedings in the above matters in and about the adoption of my Report as the basis of the Board's Order.

(Sgd.) D. M. McIntyre,
Chairman.

Dated at Toronto the 5th day of June, A.D. 1920.
(Seal)

February 23rd, 1920.

Order.

Upon reading the Report of the Chairman of the Board filed herein and the Memorandum of the adoption by the Board of the said Report as the basis of the Board's Order herein:

The Board doth order and direct that the Application for approval of By-law No. 772 of the Township of Caledon, intituled "By-law No. 772 of the Municipal Corporation of the Township of Caledon providing for the purchase of that part of the plant and equipment of the Consolidated Telephone Company, Limited, which is located within the Townships of Caledon, Albion and Mono," be dismissed and that the said purchase be not approved by the Board.

D. M. McIntyre,
Chairman.
(Seal)

Procedure File 5640.

Application by J. P. Ernst (trading as "The Ernst Telephone System), under section 88 of "The Ontario Telephone Act, 1918," for authority to increase charges for telephone service.

June 8th. Hearing, pursuant to Appointment, 10 a.m., Court House, Kitchener.

June 20th. Order.

June 17th, 1920.

Order.

Upon the application of the above named Applicant, and upon reading the Report of J. A. Ellis, Esquire, Commissioner, who heard the evidence adduced on behalf of all parties, Statements of Assets and Liabilities, Receipts and Disbursements, and other material on file,

The Board orders that the Applicant, J. P. Ernst (trading as The Ernst Telephone System), be authorized to make the following charges for telephone service, to take effect as from July 1st, 1920:

For Local Service at Baden.........	$24.00	per annum.
For Rural Party Line Service........	18.00	per annum.

And the Board makes no order for costs, save and except that the Applicants shall pay $10.00 for the law stamps required for this Order.

D. M. McIntyre,
Chairman.
(Seal)

PROCEDURE FILE 5647,

Between:

Harvey E. Royds, Assessment Commissioner for the City of Port Arthur,

Appellant,

—and—

The Toronto General Trusts Corporation, Executors of Estate of Frank E. Gibbs,

Assessment Appeal.

Jan. 6th. Notice of Appeal filed.

Mar. 24th. Hearing, pursuant to appointment, 1.30 to 2.30 p.m., Whalen Building, Port Arthur. Appeal dismissed. Assessment confirmed as fixed by District Judge.

May 17th. Approved draft Order filed.

May 17th. Order issued.

OPINION OF THE BOARD.

At the hearing of this Appeal the Board dismissed the Appeal and confirmed the assessment as fixed by the learned District Judge.

There will be a fee of $10.00 in Stamps on the Order payable by the Appellant.

(Sgd.) D. M. McINTYRE,
Chairman.

Dated at Toronto the 9th day of April, A.D. 1920.

April 9th, 1920.

ORDER.

Upon the application of the above named Appellant, in the presence of the Appellant, represented by D. J. Cowan, of the City of Port Arthur, in the District of Thunder Bay, Barrister, and the Respondent, represented by William Fitzgerald Langworthy, Esq., K.C., and upon hearing the evidence adduced on behalf of both the Appellant and Respondents, and hearing Counsel for the Appellant and Respondents;

1. The Board orders that the Appeal from the Judge of the Provisional Judicial District of Thunder Bay be dismissed and that the assessment as fixed by the learned District Judge be confirmed and that the Assessment Roll be amended and confirmed accordingly.

2. The Appellant shall pay a fee of $10.00 in Stamps.

(Sgd.) D. M. McINTYRE,
Chairman.

(Seal).

PROCEDURE FILE 5648.

Between:

Harvey E. Royds, Assessment Commissioner for the City
of Port Arthur,
Appellant,
—and—

C. I. Dreifus,
Respondent.

Assessment Appeal.

Jan. 6th. Notice of Appeal filed.

Mar. 24th. Hearing, pursuant to Appointment, 1.30 to 2.30 p.m., Whalen Building, Port Arthur. Judgment reserved.

April 9th. Judgment delivered restoring assessment as confirmed by Court of Revision.

April 23rd. Notice of Appeal to the Supreme Court of Canada filed.

May 8th. Order.

OPINION OF THE BOARD.

This is an appeal from the judgment of the learned District Judge for the District of Thunder Bay on an appeal to him from a decision of the Court of Revsion of the City of Port Arthur. For the year 1920 two parcels of land —Rolli numbers 222006 and 321642 respectively, Ward No. 3, subdivision 2—were assessed to C. J. Dreifus for the aggregate sum of $60,000, being at the rate of $300 per acre. These two parcels are described as parcels 5 and 6 respectively upon a blue print plan, filed with the Board on the hearing, and form two of a group of parcels numbered consecutively from 1 to 11. These eleven parcels are large blocks of land—parcel 5 containing 107 acres and parcel 6 containing 73 acres—and have all been subdivided into building lots except parcels 4, 5 and 8. Of these latter three parcels, parcel 4 lies adjacent to and east of parcel 5 (being separated from it only by Clarkson Street), and is nearer to the centre of the City than parcel 5. Parcel 6 lies adjacent to and west of parcel 5 (being separated from it only by Junct Avenue), and is farther from the centre of the City. Parcel 8 lies north of parcel 5, and is separated from it by the Red River Road—a well travelled highway, leading to the City—which runs between parcels 5 and 6.

On an appeal by the owner to the Court of Revision the assessment—Parcel 5 for $32,000 and Parcel 8 for $28,000—was confirmed. Upon a further appeal to the District Judge the assessment was reduced as follows: Parcel 5 to $10,700 and parcel 8 to $9,800—being at the rate of $100 per acre.

At the hearing no evidence of recent sales of this or similar properties was given for the reason that there have been no recent sales. Some evidence was given on behalf of the Respondent by witnesses dealing in real estate who thought that the parcels in question were not worth more than $100 an acre. In view of the fact that there is no movement in properties of this kind at present, or indeed since before the war, such estimates of value can be little more than guesses.

It appeared that the two parcels in question, now sought to be assessed at $60,000, were assessed in 1915 at $104,500 without protest. Furthermore, it appeared that some eight or nine years ago Mr. Meikle, a dealer in real estate, went to Cincinnati with a view to purchasing these blocks, and in a tentative way offered the owner $50,000 for the property, but he refused to deal, stating that he did not wish to sell and was holding the lands for a relative.

The chief reliance of the Appellant is the provisions of Section 69, subsection (16) of "The Assessment Act," which so far as material reads: "the Court may, in determining the value at which any land shall be assessed, have reference to the value at which similar land in the vicinity is assessed." Under the authorization of this provision, the Appellant showed that parcel 4, the unsubdivided block above referred to is assessed to a resident of Port Arthur at $400 per acre; parcel 6, the subdivided parcel above referred to is assessed in the aggregate at $425 per acre; parcel 7 ,a subdivided parcel lying west of parcel 8 and further than it from the centre of the City, is assessed in the aggregate at $400 per acre. No satisfactory proof was given that the character and quality of the land embraced in parcels 5 and 6 were materially different from the land in parcels 4, 6 and 7.

From this evidence the Board has reached the conclusion that there is not such a disparity in the values of parcels 5 and 6 as compared with parcels 4, 6 and 7 as to warrant the reduction made by the learned District Judge, and in the opinion of the Board the assessment as confirmed by the Court of Revision should be restored.

The case re Lake Simcoe Hotel Company and Town of Barrie, 11 O.W.N. 16, may be referred to.

There will be a fee of $10.00 on the Order to be paid by the Respondent.

(Sgd.) D. M. McIntyre,
Chairman

Dated at Toronto the 9th day of April, A.D. 1920.

April 9th, 1920.

ORDER.

Upon the application of the above named Appellant, in the presence of the Appellant, represented by D. J. Cowan, of the City of Port Arthur, in the District of Thunder Bay, Barrister, and the Respondent, represented by Malcolm A. McKay, of the said City of Port Arthur, Barrister, and upon hearing the evidence adduced on behalf of both the Appellant and the Respondent, and upon hearing Counsel for the Appellant and Respondent, and judgment having been reserved until this day.

1. The Board orders that the Assessment as confirmed by the Court of Revision shall be restored whereby lot number four, Concession "A," in the City of Port Arthur, shall be fixed at the sum of $32,100.00, and that lot 4 in Concession "B" in the said City of Port Arthur shall be fixed at the sum of $27,900.00, and that the Assessment Roll shall be amended accordingly.

2. That the Respondent shall pay a fee of $10.00 in law stamps.

(Sgd.) D. M. McIntyre,
(Seal). Chairman.

PROCEDURE FILE 5649.

Between:

Harvey E. Royds, Assessment Commissioner for the City of Port Arthur,

Appellant,

—and—

Laura T. Whalen, Executrix, and Alex. J. McComber and Geo. Graham, Executors, of the James Conmee Estate,

Respondent.

Assessment Appeal.

Jan. 6th. Notice of Appeal filed.

Mar. 24th. Hearing, pursuant to Appointment, 1.30 to 2.30 p.m., Whalen Building, Port Arthur. Judgment reserved.

April 9th. Judgment delivered fixing assessment of lands as follows:

205 acres at $40.00 per acre	$8,200
80 acres at $10.00 per acre	800
	$9,000

May 8th. Order.

OPINION OF THE BOARD.

For the year 1920 the west 285 acres of Mining Location No. 9 in the City of Port Arthur was assessed at $13,000, being approximately at the rate of $43 per acre. On appeal to the Court of Revision the Assessment was reduced to $11,400, being at the rate of $40 per acre, and upon a further appeal to the District Judge the assessment was reduced to $7,125, being at the rate of $25 per acre. Mining Location No. 9 is one of a group of large blocks of land—these contiguous to No. 9, being designated Nos. 8, 10, 11, 12 and 13 respectively. None of these large blocks is subdivided into building lots, and all contain large areas; for example Nos. 8, 9 and 10 contain each 400 acres, and Nos. 11, 12 and 13 contain each 160 acres. Nos. 8, 11, 12 and 13 lie east and south-east of Block No. 9, and abut or corner upon it, and are nearer the centre of the City than Block No. 9, while Block No. 10 abuts upon Block No. 9, and lies west of it, and is further from the centre of the City than Block No. 9.

It appeared that the southerly part of the west 285 acres of No. 9 is unsuitable for building purposes being composed in part of a high ledge of rock and in part of a small lake surrounded by a zone of swampy land. The total area of such southerly part is some 80 acres. The northerly and remaining part of Block No. 9 is in general character similar to the land in the surrounding Blocks.

The Appellant relied chiefly on that provision of Section 69 of subsection 16 of "The Assessment Act," which permits the adoption of the assessed value of lands in its vicinity as a standard of valuation of the land whose assessment is in appeal. It was shown that the contiguous blocks above referred to were assessed as follows: Block 8 at $35 per acre; Block 10 at $40 per acre; Block 11 at $90 per acre; Block 12 at $90 per acre; Block 13 at $90 per acre; the East 115 acres of Block 9 at $43 per acre.

For the Respondent it was shown that the land in question was recently valued at $23 per acre for purposes of "The Succession Duty Act," and that adjoining lands in the Municipality of Shuniah were assessed at $25 per acre.

Some witnesses who deal in real estate testified that the land in question was worth only $20 or $25 per acre, but as no recent sales of similar lands were cited this valuation can be little more than a guess.

After considering the evidence the Board has come to the conclusion that the assessment of similar lands in the vicinity is in the circumstances of this case the safest standard of valuation to adopt for the assessment of this land. Applying this standard to the northerly 205 acres which are normal it seems to the Board that an assessment at the rate of $40 per acre is not unreasonable. As to the southerly 80 acres which appear to be unsuitable for building purposes in their present condition a valuation of $10 per acre would be proper. Upon the basis of the above values the assessment of the west 295 acres of the block designated as Mining Location No. 9 will be as follows:

205 acres at $40........................—	$8,200
80 acres at $10........................—	800
	$9,000

The Assessment Roll will be amended accordingly.

There will be a fee upon the Order of $10.00 payable in stamps by the Respondent.

(Sgd.) D. M. McINTYRE,
Chairman.

Dated at Toronto the 9th day of April, A.D. 1920.

April 9th, 1920.

ORDER.

Upon the application of the above-named Appellant, in the presence of the Appellant, represented by D. J. Cowan, of the City of Port Arthur, in the District of Thunder Bay, Barrister, and the Respondents, represented by Martin J. Kenny, of the said City of Port Arthur, Barrister, and upon hearing the evidence adduced on behalf of both the Appellant and the Respondents, and upon hearing Counsel for the Appellant and Respondents, and judgment having been reserved until this day,

1. The Board orders that the Assessment be fixed for the lands referred to in the said Appeal in the sum of $9,000.00, and that the Assessment Roll be amended accordingly.

2. That the said Respondents shall pay a fee of $10.00 payable in stamps.

(Sgd.) D. M. McINTYRE,
(Seal) Chairman.

PROCEDURE FILE 5655.

Application under section 87 of "The Ontario Telephone Act, 1918," for an Order approving of the sale by The Consolidated Telephone Company, Limited, of its plant and equipment located in the Village of Erin, the Townships of Erin, Eramosa and East Garafraxa, to the Corporation of the Township of Erin.

(See P.F. 5635).

Feb. 23rd. Order.

Oct. 5th. Copy of Agreement arrived at between Townships of Caledon and Erin filed.

February 23rd, 1920.

ORDER.

Upon reading the Report of the Chairman of the Board filed herein, and the Memorandum of the adoption by the Board of the said Report as the basis of the Board's Order herein.

The Board doth order and direct that the application for approval of By-law No. 17 of the Township of Erin, intituled: "By-law No. 17 of the Municipal Corporation of the Township of Erin, providing for the purchase of that part of the plant and equipment of The Consolidated Telephone Company, Limited, which is located in the Townships of Erin, East Garafraxa, Eramosa and the Village of Erin," be dismissed and that the said purchase be not approved by the Board.

(Sgd.) D. M. MCINTYRE,
Chairman.

(Seal).

PROCEDURE FILE 5656.

Application by the Board of Commissioners for the Telephone System of the Municipality of Tyendinaga, under section 88 of "The Ontario Telephone Act, 1918," for authority to levy upon each of the subscribers to the Telephone System $9.34 to meet the payment of operating expenses from July 1st to December 31st, 1919.

Jan. 10th. Application (letter) filed.

Jan. 28th. Hearing, pursuant to Appointment, 10 a.m. to 12 noon, Township Hall, Lonsdale. New By-law to be submitted providing for issue of debentures covering all expenditures on construction to date, plus interest charges.

PROCEDURE FILE 5662.

Between:

The Corporation of the City of Toronto,
Appellant,

—and—

Henry W. Aiken and John B. Holden, Executors of the Estate of Annie Hamilton,
Respondents.

Assessment Appeal.

Jan. 12th. Notice of Appeal filed.

April 21st. Hearing, 10.30 a.m. to 4.30 p.m. Judgment reserved.
May 10th. Judgments delivered, dismissing Appeal.

May 28th. Form of final Order settled subject to City's Application to Board to be heard on Minutes of Judgment.

Oct. 30th. Appeal to Appellate Division dismissed with costs. (See "Globe" of this date).

OPINION OF VICE-CHAIRMAN AND MR. COMMISSIONER ELLIS.

The main point to be determined in this Appeal is whether, in the words of the Proclamation under which the land in question was annexed to the then town of West Toronto Junction, the land assessed is "held in block as a park."

It is not disputed that the land in question is still held in block, and we so find.

The Board viewed the land. From such view and from the evidence we also find that it is at present a large enclosed piece of ground, some thirty acres in extent composed partly of woodland and partly of pasture, and that there is a house thereon. The house and land are occupied together as one holding. In our opinion the definition of the word "park" includes land of this nature, and we have, therefore, come to the conclusion that the land is still "held in block as a park."

The land at the time the fixed assessment was given was not a public park. The evidence shows that it was enclosed with a fence, and that access to it was through a gate. People were only admitted to it on the invitation or with the permission of the then owner.

There have been some changes in the property since the Proclamation was issued, the principal one being the destruction of ponds in which trout were formerly preserved. Works carried on by the Municipal Authorities at both ends of the park are, in our view, largely if not entirely responsible for the disappearance of these ponds. Some game was also formerly preserved on the land, but this too has long since vanished. The house and the grounds are somewhat dilapidated, and are no doubt in an inferior condition to what they were when the Proclamation was issued. We cannot, however, find that on account of the changes and dilapidation the land in question has ceased to be a park.

A number of other contentions were raised by the City, but to none of these can we give any effect.

In our opinion the Appeal should be dismissed, and the Assessment made by the Court of Revision and confirmed by the County Judge should stand.

(Sgd.) A. B. INGRAM,
Vice-Chairman.

(Sgd.) J. A. ELLIS,
Commissioner.

Dated at Toronto this 4th day of May, A.D. 1920.

OPINION OF THE CHAIRMAN.

By Proclamation of His Honour, the Lieutenant-Governor, dated the 30th day of December, A.D. 1890, and made under the authority of Section 22 of the then "Municipal Act" (R.S.O., Cap. 184), there was added to the Town of West Toronto Junction certain parts of the adjacent Township of York. Under this Act the Lieutenant-Governor was empowered to effect this annexation "on such terms and conditions, as to taxation or otherwise, as the Lieutenant-Governor in Council sees fit and the Council of the Town may consent to." In fact several parcels belonging to different owners were annexed by the proclamation in question on various "terms and conditions as to taxation or otherwise." The parcel with which this appeal is concerned is dealt with in the following terms in the Proclamation: "And we further direct that that portion of the Kennedy Estate, known as Block 'A' according to registered plan No. M135, in the office of the Master of Titles, included in Block Two aforesaid, shall be assessed at the rate of five hundred dollars per acre and no more, so long as the same is held in block as a park."

Paragraph 4 of By-law 187 of the Town of West Toronto Junction, passed 22nd December, 1890, by which the Town Council consented to the annexation, and its terms and conditions read as follows:

> "4. That this Council further consents to the property known as the Kennedy Estate (included in block number Two aforesaid) being the lands included in plan number M135 filed in the office of the Master of Titles being added to the said Town upon the following terms and conditions that is to say, That that portion of said Kennedy Estate known as block 'A' according to said plan M135 shall be assessed at the rate of five hundred dollars per acre and no more so long as the same is held in block as a Park."

It is to be noted that the passage of By-.aw No. 187 was anterior in time to the proclamation; indeed its passage is recited in the proclamation. In fact the "terms and conditions" of annexation were the subject of negotiations between the Town Council and the landowners affected, and were in the nature of a bargain, and these "terms and conditions" were afterwards adopted by the Lieutenant-Governor and incorporated in the proclamation.

By Chapter 125 of the Statutes passed by the Ontario Legislature in the year 1909, the Town of West Toronto Junction was on the 1st May, 1909, annexed to the City of Toronto upon the terms therein set out, and thereafter ceased to be a separate municipality. It is expressly provided by subsection (20) of Section 1 of this Act that nothing therein contained should affect "the proclamation of His Honour the Lieutenant-Governor in Council dated the 30th day of December, 1890, respecting the assessment of the lands of x x x x the Kennedy Estate."

One of the consequences following this annexation by force of the provisions of Section 56 of the then "Municipal Act" (3 Ed. 7, Cap. 19), was that the By-laws of the City of Toronto became operative in the territory which had composed the Town of West Toronto Junction and the By-laws of the latter municipality, except only by-laws relating to roads and streets ceased to be applicable. Mr. Geary for the City argues from this supersession in the annexed areas of the By-laws of the Town of West Toronto Junction by those of the City of Toronto that the by-law of the former municipality consenting to the special treatment of the lands of the Kennedy Estate was in effect repealed and the partial exemption lost. This argument overlooks the fact that the effective instrument granting preferential treatment to the lands of the Kennedy Estate was the proclamation of the Lieutenant-Governor, and its effect and continued efficacy were not affected by the annexation or the supersession of the by-laws of the town by those of the City. But apart from that the Board has no manner of doubt that the effect of subsection (20) of section 1 of the Act of 1909 was to save the rights as to assessment conferred by the Proclamation upon the lands of the Kennedy Estate after those lands came within the jurisdiction of the Corporation of the City of Toronto.

Another contention raised on behalf of the City must in the opinion of the Board also fail, namely that the Town Council having no inherent substantive authority to pass By-law No. 187 granting exemption by way of a fixed assessment, could not pass such a by-law as an expression of consent supplementary to the proclamation of the Lieutenant-Governor. The statute confers upon the Lieutenant-Governor in Council authority to annex in wide terms, namely, "on such terms and conditions as the Lieutenant-Governor in Council sees fit;" the only limitation being that the "terms and conditions" shall be such as "the Council of the town may consent to." This authority in the opinion of the Board empowers the Lieutenant-Governor in Council with the consent of the Town Council to give preferential treatment in respect of taxation to the annexed areas as was done in this case.

Heretofore the lands of the Kennedy Estate referred to in the above proclamation have been assessed by the City of Toronto except for purposes of the Provincial War Tax Act at the rate of $500 per acre. For the year 1920 the lands have been assessed at $3,000 per acre, making for the thirty acres a total assessment of $90,000 for land, exclusive of buildings. Upon appeal to the Court of Revision this assessment was reduced to $500 per acre as fixed by the proclamation of 1890, and the decision of the Court of Revision was confirmed on appeal to the learned County Judge of the County of York. The sole question calling for determination by the Board is whether the condition specified in the proclamation is being observed, that is whether the lands of the Kennedy Estate known as Block "A" are now "held in block as a Park." It is not disputed that the lands in question are still held in block, but the question is whether the lands are also held as a park.

The word "park" is a word of various significations as consultation of a dictionary will show. The Century Dictionary gives no fewer than seven meanings; for example in English law, park is "a tract of land inclosed and privileged for wild beasts of chase by the monarch's grant or by prescription;" again park is defined as "a considerable extent of pasture and woodland, surrounding or adjoining a country house and devoted primarily to purposes of recreation and enjoyment, and often serving to support a herd of cattle or a flock of sheep, or in Europe stocked with deer;" again it is defined as "a piece of ground, usually of considerable extent, set apart and maintained for public use and laid out in such a way as to afford pleasure to the eye as well as opportunity for open air recreation: as Central Park in New York, or Hyde Park in London." The fact is that the word is applied with apparently perfect propriety to conditions as widely differing as does Hyde Park, London, from Algonquin Park in Northern Ontario, and to the various gradations between. Now when the Council of the Town of West Toronto Junction were considering By-law No. 187, it is obvious that not all these various conditions could have been present to their minds, but only a certain existing specific condition. The authorities show that enquiry can be made as to the conditions with reference to which the Town Council enacted their by-law. In the case River Wear Commissioners v. Adamson, 2 A.C., p. 763, Lord Blackburn is thus reported:

"In all cases" (of construing instruments in writing)" the object is to see what is the intention expressed by the words used. But from the imperfection of language it is impossible to know what that intention is without enquiring further and seeing what the circumstances were with reference to which the words were used and what was the object, appearing from these circumstances, which the person using them had in view; for the meaning of words varies according to the circumstances with respect to which they were used."

Again, in Hart v. Hart, 18 C.D., at p. 692–3, Mr. Justice Kay says:

"I agree that here the Court must not shut its eyes or blindfold itself, but must try to put itself, in order to understand this agreement in the position, as near as it can, of the parties making the agreement. That is the rule, as I understand, on the construction of every deed or document, whether it be an agreement, a deed, or a will; the Court has a right to know and is bound to know all the material facts which were known at the time the agreement, deed, will or whatever it may be, was entered into or made. That is legitimate in all cases for the purpose of construing a written instrument."

Again, in The King v. Hall, 1 B. & C., at p. 156, Lord Chief Justice Abbott says: "Now the meaning of particular words in Acts of Parliament, as well zs other instruments, is to be found not so much in a strict etymological propriety of language nor even in popular use, as in the subject or occasion, in which they are used, and the object that is intended to be attained."

Again, in Lion Insurance Association v. Tucker, 12 Q.B.D., at p. 186, Brett, Master of the Rolls, says:

"Whenever you have to construe a statute or document you do not construe it according to the mere ordinary general meaning of the words, but according to the ordinary meaning of the words as applied to the subject matter with regard to which they are used, unless there is something which obliges you to read them in a sense which is not their ordinary sense in the English language so applied."

It is competent, therefore, to enquire what were the facts present to the minds of the parties to the negotiations which led up to the passing of By-law No. 187, which is the foundation of the proclamation; what were the surrounding circumstances, and what do those circumstances show was the object of the Town Council in passing the By-law and procuring the issue of the proclamation by the Lieutenant-Governor. The evidence shows that in 1890 block "A" or the major part of it was called "the park." At p. 46 of the notes of evidence Dr. Aikens says that Mr. Kennedy always spoke of this general property as a park. Again, Dr. Aikens says: "it was commonly spoken of, not as the Kennedy Park but the Lakeview Park."

Now in the year 1890, and thereabouts, what was the condition of this piece of land so commonly called a park, and which the Council of West Toronto Junction stipulated in By-law No. 187 should be held as a park. Mr. Peter Laughton, a former Councillor and Mayor of the Town of West Toronto Junction, asked what was the condition of the property in 1890, says: "the late Mr. Kennedy had nice fish ponds there, and he kept some pheasants and rabbit warrens, and he used to let Sunday School picnics and private picnic parties to go in and use this ground just like a public park so long as they did not do any damage to the property. I have been there myself at picnics."

At p. 17 of the notes of evidence Robert Kennedy, son of David Kennedy, asked if he agreed with Ex-Mayor Laughton's testimony, says: "Yes, I quite agree with what Mr. Laughton says, that in 1890 it was a park, and a beautiful park, and my father expended a lot of money in keeping up the place; he had walks and driveways and he kept them in repair."

At p. 22 of the notes of evidence Samuel Ryding says of the property "it certainly was a beautiful place in 1890. . . . one of the most beautiful places. I do not know where there is one like it, he had fish ponds and kept; pheasants and rabbits. . . . I never saw any cattle there but I saw horses; the late Mr. Kennedy had some nice horses; he used to take pride in his horses; I do not remember seeing more than four horses." Again, at p. 26: "Mr. Kennedy had men looking after the grounds all the time; he had men looking after the grounds to keep them up to date and keep them beautiful, he planted trees, he set cut trees." Mr. Ryding further states that the park was not maintained for profit.

At. p. 27 of the notes of evidence James Scott says: "there was never a beast in the park or near the fish ponds for 30 years in my time till the last 14 years or so. I moved the park and kept it in a grand state; Mr. Kennedy said he never had it so well done; it was like silk, and he had steps down to these fish ponds made of stone; I have seen him taking people to the fish pond, and giving them fishing rods to fish in for sport." . . . there were nice walks; it was just a lovely place. . . . I always found Mr. Kennedy obliging in letting people in. As far as that is concerned I know no more about it. He even delighted in taking people in."

It appears also from the evidence that Mr. David Kennedy brought the Governor-General and such men as the late Christopher Robinson and Pierpont Morgan in to fish and view the park.

It appears to me that the foregoing citations give a clue to the sense in which the Town Council understood and used the term "park" in By-law No. 187, and the object they had in view. A place of much natural beauty had been rendered more attractive by the expenditure from time to time of money, care and labor, in setting out trees, laying out walks, constructing dams to form artificial ponds which were stocked with game fish. while rabbit warrens and pheasant preserves were also established. So attractive was it that many people, including distinguished personages and picnic parties resorted thither for amusement and recreation. It seems to me that the intention of the parties expressed in the condition "so long as the same is held . . . as a park" was that this block of land should be maintained measurably in the state in which it was when the preference was granted and the condition imposed.

Has the condition so interpreted been observed? The only conclusion from the evidence is that it has not.

At p. 11 of the notes of evidence the witness, Peter Laughton, says:

"Q.—What is it to-day?

A.—It is used as a dairy farm.

Q.—What do you mean by that?

A.—They have a lot of cattle and milch cows and bulls and dogs and different things. I believe they sell milk, but I cannot swear.

Q.—Are the public allowed in?

A.—No, notices to keep out . . . there are no ponds there to fish in now."

. . . . .

Q.—It is the same tract of land?

A.—Same tract of land. There were two beautiful fish ponds on it then, and a lot of ornamental trees.

Q.—The trees are largely there yet?

A.—Not near so many of them. . . . they (the trees) have been let go for thirty years, and cattle have been running amongst them, and they have been destroyed."

At. p. 19 of the notes of evidence Robert Kennedy says: "the fence has been in a dilapidated state for years; there has not been a dollar spent on the property to keep it in repair."

At p. 22 of the notes of evidence Samuel Ryding says:

"Q.—What is its condition to-day?

A.—Altogether different from what it was at that time.

Q.—How would you describe it to-day?

A.—I would describe it as almost forgotten and given up and no interest taken in it; it has been let go to wreck."

. . . . . .

"Q.—Do the public go in there?

A.—I do not think so. not now.

. . . there is quite a change in the trees. . . . there are no ponds there.

Q.—Do you happen to know that that was by reason of the sewage finding its way in?

A.—I do not think any sewage found its way in.

Q.—Was not that the difficulty that they could not maintain the ponds on account of the sewage?

A.—No, that was before the sewers were thought of; it has nothing to do with the sewers."

At p. 29 of the notes of evidence James Scott says:

Q.—The ponds have been allowed to go?

A.—They are quite dry.

Q.—How long ago is that?

A.—That must be 20 years, I cannot tell exactly. . . .

Q.—While Dr. Aikens (tenant) was an occupant did anyone keep up the ponds and keep this place in any sort of order?

A.—No, they were altogether gone."

The fact seems to be that while this land was in the possession of David Kennedy it was kept in a high condition of beauty and attractiveness by the expenditure of labor, skill and money, without any thought of profit, so that it earned and deserved the name of park. Subsequently it with other lands fell into the possession of persons who took it as a speculative investment, their only object being to spend as little and make as much money as possible, and they have not pretended to keep it in the condition it was in Kennedy's time, and beyond restoring the dam once after it went out they have spent no labor, money or care to maintain it in a condition at all approaching that in which it was when they purchased it. It seems to me that something more was incumbent on the Respondents than to hold this land as a dairy farm, which the evidence shows it is to-day. The proclamation provides for a fixed assessment of other lands included in the annexed area at a value which in the judgment of the assessors such lands shall be reasonably worth for farm purposes as long as (the then owners) shall own said land or any part thereof as farm lands not subdivided into lots or sold. If holding Block "A" as a dairy farm was intended to satisfy the intentions of the Town Council when passing By-law No. 187, there was no need of a reference to its status as a park, but it would have been sufficient to say that it should enjoy the fixed assessment so long as it was held in block as farm lands. I have reached the conclusion that, comparing its condition as it was and as the Council viewed it when the By-law was passed in 1890 with its condition now, this block of land is not held as a park in the sense intended by the by-law and proclamation, and that consequently it should be assessed at its actual value.

An attempt was made by the Respondent to establish the theory that if there has been failure on their part to hold the land as a park it was due to the action of the Appellant in causing washouts that carried in silt which filled up the pond basins, and that the discharge by the City of sewage down the valley in which the ponds were made it impossible to keep fish in them. The answer to such a contention seems to be that the status of this block under the Assessment Act is to be determined independently of such considerations. The sole, relevant question to be considered by the assessor is, has the condition of its exemption been observed, that is, has the land been held "in block as a park." If not, then it becomes assessable at its actual value. If the failure to hold in block as a park has, as suggested, been due to any action by the City, the Respondents have their remedy against the City by a claim for compensation under the Municipal Act or by action at law for damages.

While I conclude on the grounds above set out that the land has lost its exemption, I am of the opinion that there is not sufficient material before the Board to fix accurately its actual value for assessment purposes. A view has led me to conclude that the lands should be surveyed and levels taken, and the areas at different levels relatively to the adjoining streets computed and the values of the land at the several levels fixed by the Board on evidence to be hereafter submitted. The only evidence given bearing on value seems to me to be insufficient on which to base a safe conclusion. Mr. Nixon says at p. 4 of the notes of evidence: "the amount of the assessment, 30 acres at $3,000 an acre, would be on a par with the assessment of adjoining properties. If the land were subdivided into various parcels and put on the market."

Q.—What do you say as to the correctness of that assessment under the Act?

A.—I say that the assessment is quite correct at $90,000.

A view of the property has satisfied me that portions of it are immediately available for building purposes and are no doubt very valuable, while large areas of it are unsuitable for such purposes, and are almost valueless in their present condition. These various classes of land suitable and unsuitable for building purposes should be plotted out and their respective areas determined and evidence submitted to show the respective values of these several classes of land.

My conclusion is that Block "A" has lost its exemption or right to a fixed assessment by reason of the failure to observe the condition to hold it in block as a park; that it is assessable at its actual value under the Assessment Act; that the appeal should be allowed but that as the evidence before the Board is not sufficient to enable it to determine its actual value further evidence should be submitted as in the foregoing opinion suggested.

The Vice-Chairman and Mr. Ellis do not agree with the conclusion which I have reached as above set out. If the question involved were a question of law, then under Section 7 of the Board's Act (R. S.O., c. 186), the opinion of the Chairman should prevail. The question involved is I think a question of mixed law and fact, and that being so the opinion of the Vice-Chairman and Mr. Ellis prevails, and the appeal must be dismissed.

There will be no costs but the Appellants will pay in law stamps on the Order $15.00.

(Sgd.) D. M. McIntyre,
Chairman.

Dated at Toronto the 8th day of May, A.D. 1920.

May 29th, 1920.

ORDER.

The appeal of the above named appellants herein from the Judgment of His Honour Judge Coatsworth, Judge of the County Court of the County of York, dated the 30th day of October, 1919, dismissing the appellants' appeal from the Order or Judgment of the Court of Revision of the City of Toronto, having come before this Board on the 21st day of April, 1920, upon hearing the evidence and counsel for both parties and judgment having been reserved until this date.

1. It is ordered that the said appeal be and the same is hereby dismissed without costs except that the said appellants shall pay $15.00 in law stamps on this Order.

(Sgd.) D. M. McIntyre,
Chairman.

(Seal).

PROCEDURE FILE 5683.

Between:

The Municipal Corporation of the County of Lambton,
Applicant,
—and—

The Municipal Corporation of the County of Huron,
Respondent.

(Re Aux Sables River Bridge at Grand Bend).

Jan. 28th. Notice of Application filed.

Feb. 11th. Reply filed.

Feb. 20th. Order for production issued.

Feb. 26th. Hearing, pursuant to Appointment, 10 a.m. to 11.45 a.m., at the Court House, Sarnia. Settled by agreement between Parties. (See Reporter's Notes). Designing Engineer to be appointed by Board.

Mar. 5th. Order issued.

Mar. 13th. Order issued appointing Jas. A. Bell, C.E., Engineer for the work.

February 26th, 1920.

ORDER.

Upon the application of the above named Applicant, in presence of the Applicant and Respondent, upon hearing the evidence adduced on behalf of the Applicant and Respondent, and upon hearing Counsel for the Applicant and Respondent, the Board orders:

1. That the Bridge over the Aux Sables River at Grand Bend on the Lake Road is a bridge on the boundary between the County of Lambton and the County of Huron upon and connecting the County roads systems of the two counties under the Highway Improvement Act, and that the bridge to be erected over the said river at the said point shall be built and maintained at the expense of the Applicant and the Respondent in equal shares.

2. That the immediate construction of a new bridge at the point in question is necessary, and the Board orders and directs that such new bridge shall be proceeded with and constructed without delay by the Applicant and the Respondent.

3. In the construction and erection of the said new bridge it shall be built on the Lake Road in approximately its present position, but the north and south abutments are each to be moved to the north to secure a stable and permanent foundation.

4. The new bridge is to be as nearly as may be of the same length as the present bridge.

5. The superstructure of the bridge to be constructed is to be of steel and of one span.

6. The Ontario Railway and Municipal Board shall name and appoint an Engineer who is to design the proposed structure, prepare the plans and specifications therefor, and supervise the construction thereof, and he shall also prepare the necessary plans for a temporary crossing over the said river during the construction of the new bridge.

7. The Engineer so appointed by the Ontario Railway and Municipal Board in designing the said bridge shall consider the probability of the deepening of the channel of the River Aux Sables for drainage purposes or from natural causes in the future, when determining the depth to which each abutment is to be sunk.

8. The Engineer so appointed by the Board and the Road Superintendent of each County, as soon as the plans and specifications are approved by the Highway Department, shall advertise for tenders, prepare the contracts for the construction of the said new bridge, including the temporary crossing, and shall submit the same to the County Roads committee of the Council of each of the Municipalities and the contract, or contracts shall be executed by the Warden and Clerk of each of the said Counties under the Seal thereof within ten days after such submission; and failing the adoption and execution of the said contract or contracts for the work within the said ten days, the Ontario Railway and Municipal Board may thereupon issue a peremptory Order directing the execution of the said contract or contracts.

9. The said Engineer and the Road Superintendent of each County shall sell all of the material of the old bridge that is not required in the new structure, to the best advantage that they can, and the proceeds thereof, after deducting the cost of and incident to such sale, shall be divided equally between the Applicant and the Respondent.

10. It is further ordered that the Respondent, the County of Huron, shall pay to the Applicant, the County of Lambton, the disbursements of the County of Lambton necessarily and properly made in preparing for and incidental to the Hearing before the Ontario Railway and Municipal Board, but the Applicant shall not be entitled to profit costs; and the bill of costs for the disbursements of the Applicant may be taxed by the Board at any time on two days notice to the Respondent.

(Sgd.) D. M. McIntyre,
(Seal). Chairman.

Procedure File 5687.

Between:

The Hydro-Electric Power Commission, and
The Ontario Power Company of Niagara Falls,
Appellants

—and—

The Municipal Corporation of the City of Niagara Falls,
Respondent.

Assessment Appeal.

Jan. 30th. Notice of Appeal filed.

Feb. 17th. Subpoena issued to Respondents.

Order issued for Production (in 5 days) by Appellants.

April 19th. Hearing fixed for 20th inst., at 10.30 a.m., adjourned "sine die" at request of Parties.

PROCEDURE FILE 5704.

Application by J. Grant Sprague (trading as The Sprague Telephone System), under section 88 of "The Ontario Telephone Act, 1918," for authority to increase charges for telephone service.

Feb. 16th. Application (letter), etc., filed.

April 27th. Hearing, pursuant to Appointment, 10 a.m., Shire Hall, Picton.

May 20th. Order.

May 20th, 1920.

ORDER.

Upon the application of the above named Applicant, and upon reading the Report of Donald M. McIntyre, Esquire, K.C., Chairman, who heard the evidence adduced on behalf of all parties, Statements of Assets and Liabilities, Receipts and Disbursements, and other material filed.

The Board orders that the Applicant be authorized, subject to the conditions herein prescribed, to charge an annual rental of $15.00 for telephone service, to take effect as from July 1st, A.D. 1920.

And the Board further orders:

1. That the Applicant shall, with all reasonable despatch, improve, repair and reconstruct his telephone system in such manner as shall ensure the furnishing of an efficient service to his subscribers.

2. That the Applicant shall furnish a continuous service between the hours of 6 a.m. and 10 p.m. from April 1st to September 30th, and between the hours of 7 a.m. and 9 p.m. from October 1st to March 31st, in each year, and on Sundays throughout the year between the hours of 8 a.m. and 10.30 a.m. and 6 p.m. and 8 p.m.

3. That this Order shall only become effective upon the Board being furnished by its Electrical and Telephone Expert with his certificate to the effect that the Applicant is furnishing a reasonably efficient service to his subscribers.

And the Board makes no order for costs, save and except that the Applicant shall pay $10.00 for the law stamps required for this Order.

(Sgd.) D. M. McINTYRE,
Chairman.

(Seal).

PROCEDURE FILE 5705.

Application by Thomas Convay, under section 87 of "The Ontario Telephone Act, 1918," for approval of sale of The Dresden Rural Telephone System to The Bell Telephone Company of Canada, Limited.

Feb. 17th. Application (letter) filed.

March 31st. Hearing, pursuant to Appointment, 1.15 p.m., Township Hall, Dresden. Sale approved.

April 12th. Order.

PROCEDURE FILE 5723.

Application by the Township of Scarborough, under chapter 81, Ontario Statutes, 1918, for approval of proposed By-law to construct, maintain and operate a system of waterworks in an area defined in the said By-law.

Feb. 25th. Application filed.

Mar. 15th. Formal application filed as directed.

Mar. 22nd. Hearing, pursuant to Appointment, 11 a.m. to 12.20 p.m. Certificate of Provincial Board of Health to be filed approving source of supply, etc. Application granted (provided By-laws in proper legal form).

April 15th. Order.

April 15th, 1920.

ORDER.

Upon the application of the said Corporation, and upon reading the Notice of Application filed by Henry E. Redman, Esquire, Solicitor for the Applicant, the Statutory Declarations of William David Annis, Clerk of the said Township, the duplicate original of the said proposed By-law, and the other material filed, and upon hearing what was alleged by Counsel for the Applicant and by ratepayers present before the Board at its public Hearing of this Application on Monday, the twenty-second day of March, 1920, both in favour of and opposed to the said Application, public notice of which Hearing was duly given by the Applicant, as directed by the Board, and upon reading the Certificate of Approval by the Provincial Board of Health filed,

The Board orders, under and in pursuance of the provisions of Chapter 81 of the Statutes of the Province of Ontario passed in the eighth year of the reign of His Majesty King George V, that the said By-law No. 1026, intituled "By-law No. 1026 of the Township of Scarborough, being a By-law to set apart a defined area of the Municipality, and to authorize the construction and operation of a system of water works therein, and to authorize the issue of debentures to the amount of one hundred and thirty thousand dollars for the construction of such water works," be and the same is hereby approved.

(Sgd.) D. M. McINTYRE,
Chairman.

(Seal).

PROCEDURE FILE 5745.

In the Matter of the Petition of James Anderson, et al, under section 21 of "The Municipal Act," for annexation to the City of Windsor of part of the Township of Sandwich West.

Mar. 8th. Petition, etc., filed.

April 13th. Hearing, pursuant to Appointment, 11 a.m. to 12 noon City Hall, Windsor. Affidavit to be filed showing actual number of Municipal Electors in area sought to be annexed. Municipalities of Windsor and Township of Sandwich West to fix date from which annexation to take effect. On receipt of information as directed. Application will be granted.

July 16th. Consent of County of Essex filed. (See letter from Messrs. McLeod & Bell of 14th inst.)

July 16th. Order.

April 13th, 1920.

ORDER.

In the matter of the Petition of James Anderson, et al, under section 21 of "The Municipal Act," for the annexation to the City of Windsor of that portion of the Township of Sandwich West more particularly described as follows: "All and singular that certain parcel or tract of land and premises situate, lying and being in the Township of Sandwich West, in the County of Essex and Province of Ontario, containing by admeasurement sixty-three and sixty-five hundredths acres (63–65 100) be the same more or less, being composed of a part of Farm Lots Seventy-three (73) and Seventy-four (74) in the First Concession of said Township, and which said parcel may be more particularly described as follows:

Commencing in the Southerly limit of Elliott Street at its intersection with the Easterly limit of Wellington Avenue; thence Easterly along the said Southerly limit of Elliott Street, Five Hundred and Eighty-four feet, Ten inches (584′ 10″) more or less to the Easterly limit of Farm Lot Seventy-four (74); thence Southerly along the last mentioned limit Thirty-eight Hundred and Ninety-six feet (3896′) more or less to the Southerly limit of Tecumseh Road; thence Westerly along the last mentioned limit Seven Hundred and Eighty-five feet (785′) more or less to the intersection with the production of the Westerly limit of alley on registered plan Number Sixty-eight (68); thence Northerly to and along the said Westerly limit of the alley Twenty-four Hundred and Twenty-two feet (2422′) more or less to the Southerly limit of Adelaide Street; thence Easterly along the Southerly limit of Adelaide Street and the production thereof, Two Hundred and Eleven feet (211′) more or less to the Westerly limit of Wellington Avenue; thence Northerly along the last mentioned limit Fourteen Hundred and Eighty-five feet (1485′) more or less to the place of beginning.

Upon the application of the Petitioners and this Board having appointed April 13th, 1920, at the hour of eleven o'clock in the forenoon at the City Hall, in the City of Windsor, as the time and place for the hearing of the said petition and notice of the said Hearing having been served upon the Clerk of the Municipal Corporation of the Township of Sandwich West and the Clerk of the Municipal Corporation of the County of Essex and the Clerk of the Municipal Corporation of the City of Windsor and having also been published in the Border Cities Era and the Border Cities Star, newspapers published in the said City of Windsor and having a circulation in the said district, and upon hearing what was alleged by Counsel for the petitioners and for the Corporation of the City of Windsor, the Corporation of Sandwich West, and the Corporation of the County of Essex, and upon hearing the evidence adduced and upon reading the exhibits filed and upon hearing what was alleged by Counsel aforesaid:

1. It is ordered that that portion of the Township of Sandwich West, particularly described as follows: "All and singular that certain parcel or tract of land and premises situate, lying and being in the Township of Sandwich West, in the County of Essex and Province of Ontario, containing by admeasurement Sixty-three and Sixty-five Hundredths (63–65 100) acres be the same more or less, being composed of a part of Farm Lots Seventy-three (73) and Seventy-four (74) in the First Concession of said Township, and which said parcel may be more particularly described as follows: Commencing in the Southerly limit of Elliott Street at its intersection with the Easterly limit of Wellington Avenue; thence Easterly along the said Southerly limit of Elliott Street, Five Hundred and Eighty-four feet, Ten inches (584′ 10″) more or less to the Easterly limit of Farm Lot Seventy-four (74); thence Southerly along the last mentioned limit Thirty-eight Hundred and Ninety-

six feet (3896′) more or less to the Southerly limit of Tecumseh Road; thence Westerly along the last mentioned limit Seven Hundred and Eighty-five feet (785′) more or less to the intersection with the production of the Westerly limit of alley on registered plan Number Sixty-eight (68); thence Northerly to and along the said Westerly limit of the alley Twenty-four Hundred and Twenty-two feet (2422′) more or less to the Southerly limit of Adelaide Street; thence Easterly along the Southerly limit of Adelaide Street and the production thereof, Two Hundred and Eleven feet (211′) more or less to the Westerly limit of Wellington Avenue; thence Northerly along the last mentioned limit Fourteen Hundred and Eighty-five feet (1485′) more or less to the place of beginning; be and the same is hereby annexed to the Municipal Corporation of the City of Windsor.

2. And it is further ordered that all assets and liabilities as between the said lands so annexed and the City of Windsor and the County of Essex, shall be adjusted under the provisions of the Municipal Act applicable thereto, in case the parties are unable to agree on such adjustment, as of the first day of January, 1920.

3. And it is further ordered that this Order shall take effect from and after the first day of July, 1920.

(Sgd.) D. M. McINTYRE,
(Seal). Chairman.

PROCEDURE FILE 5767.

Application by The Leeds & Grenville Independent Telephone Company, Limited, under section 88 of "The Ontario Telephone Act, 1918," for approval of increased charges for service.

March 13th. Application (letter) filed.

April 28th. Hearing, pursuant to Appointment, 10 a.m., Court House, Brockville. Approval recommended.

June 7th. Order.

June 7th, 1920.

ORDER.

Upon the application of the above named Applicant, and upon reading the Report of Donald M. McIntyre, Esquire, K.C., Chairman, who heard the evidence adduced on behalf of all parties, Statements of Assets and Liabilities, Receipts and Disbursements, and other material filed.

The Board orders that the Applicant, The Leeds and Grenville Independent Telephone Company, Limited, be authorized to charge its subscribers an annual rental of $15.00 for telephone service, to take effect as from May 1st, 1920.

And it is further ordered:

1. That the rates herein authorized shall apply to all persons to whom the Applicant is furnishing service.

2. That for the purpose of providing a fund to meet the cost of the renewal of its plant and equipment, the Applicant shall on December 31st, 1920, and each year thereafter set aside out of its earnings a sum equal to not less than five per cent. of the total value of the plant and equipment used in the Applicant's business on December 31st in each such year. The fund so provided shall, unless otherwise authorized by the Board, be applied

exclusively to the cost of renewing such portion of the said plant and equipment as may from time to time be rendered necessary by depreciation or obsolescence, and after deducting therefrom such amounts as may have been so expended in any one year the residual amount shall be deposited in a chartered bank at interest and the money so deposited, may, with the approval of the Board, be expended in new constructions or extensions or additions to the property of the company, or with the like approval may be invested in interest-bearing securities; and all interest accruing from any portion of the depreciation fund so deposited or invested, and such portion of the earnings fixed by the Board as attributable to the moneys so expended in new construction, extensions or additions, shall from time to time be carried to the credit of the said fund.

3. That the Applicant shall on or before the fifteenth day of January in each year, furnish the Board with a Report setting forth: (a) The total amount standing at the credit of the fund referred to in Clause 2 hereof on the 31st day of December in the preceding year; (b) The amount of such fund which has been temporarily used in the purchase of securities; (c) The names and values of the securities so purchased, together with (d) a certified statement from the bank in which the fund is deposited, showing the amount standing at the credit of such fund on the last named date.

4. That the Applicant shall keep separate records of all expenditures upon the construction, operation, maintenance and renewal of its plant and equipment and shall each year furnish its shareholders with an annual report and balance sheet in the form approved of by this Board as set forth on pages 141 to 144 of "Telephone Systems, 1919."

And the Board makes no order for costs, save and except that the Applicant shall pay $10.00 for the law stamps required for this Order.

(Sgd.) D. M. McIntyre,
(Seal). Chairman

Procedure File 5770.

Application by Theodore Pratt, Owner, under "The Planning and Development Act," for approval of plan of part Farm Lot 101, Concession 1—formerly in the Township Sandwich East—now in the Town of Ford City, County of Essex.

March 16th. Application and material filed.

March 22nd. Hearing, pursuant to Appointment, 12 noon to 12.30 p.m Plan approved and certified.

Procedure File 5771.

Application by the Township of Etobicoke, under Chapter 81, Ontario Statutes, 1918, for approval of proposed By-law to construct, maintain and operate a system of waterworks in an area defined in the said By-law.

March 16th. Application filed.

April 16th. Formal application filed.

May 3rd. Hearing, pursuant to Appointment, 11 a.m. to 12.15 p.m. Council to reconsider By-law at a Public and advertised meeting. Provincial Board of Health's approval to be recited in By-law and filed with Board. Hearing adjourned "sine die" pending these steps. (See Reporter's Notes).

Nov. 3rd. Application withdrawn.

PROCEDURE FILE 5774.

Application by The Scarboro Independent Telephone Company, Limited, under section 88 of "The Ontario Telephone Act, 1918," for approval of increased charges for telephone service.

March 18th. Application (letter) filed.

May 4th. Hearing, pursuant to Appointment, 4.30 to 5 p.m. Rate of $14.00 per annum to shareholders and non-shareholders approved.

May 20th. Order.

May 20th, 1920.

ORDER.

Upon the application of the above named Applicant, upon hearing the evidence adduced on behalf of all parties, upon reading Statements of Assets and Liabilities, Receipts and Disbursements, and other material filed,

The Board orders that the Applicant, The Scarboro' Independent Telephone Company, Limited, be authorized to charge its subscribers an annual rental of $14.00 for telephone service, to take effect as from May 1st, 1920.

And it is further ordered:

1. That the rates herein authorized shall apply to all persons to whom the Applicant is furnishing service.

2. That for the purpose of providing a fund to meet the cost of the renewal of its plant and equipment, the Applicant shall on December 31st, 1920, and each year thereafter set aside out of its earnings a sum equal to not less than five per cent. of the total value of the plant and equipment used in the Applicant's business on December 31st in each such year. The fund so provided shall be applied exclusively to the cost of renewing such portion of the said plant and equipment as may from time to time be rendered necessary by depreciation or obsolescence, and after deducting therefrom such amounts as may have been so expended in any one year the residual amount shall be deposited in a chartered bank at interest and may, with the approval of the Board, be expended in new constructions or extensions or additions to the property of the company, or with the like approval may be invested in interest-bearing securities; and all interest accruing from any portion of the depreciation fund so deposited or invested, and such portion of the earnings fixed by the Board as attributable to the moneys so expended in new constructions, extensions or additions, shall from time to time be carried to the credit of the said fund.

3. That the Applicant shall on or before the fifteenth day of January in each year, furnish the Board with a report setting forth: (a) The total amount standing at the credit of the fund referred to in Clause 2 hereof on the 31st day of December in the preceding year; (b) The amount of such fund which has been temporarily used in the purchase of securities; (c) The names and values of the securities so purchased, together with (d) a certified statement from the bank in which the fund is deposited, showing the amount standing at the credit of such fund on the last named date.

4. That the Applicant shall keep separate records of all expenditures upon the construction, operation, maintenance and renewal of its plant and equipment and shall each year furnish its shareholders with an annual report and balance sheet in the form approved of by this Board as set forth on pages 141 to 144 of "Telephone Systems, 1919."

And the Board makes no order for costs, save and except that the Applicant shall pay $10.00 for the law stamps required for this Order.

(Sgd.) D. M. MCINTYRE,
Chairman.

(Seal).

PROCEDURE FILE 5777.

In the matter of the Application of The Temiskaming Telephone Company, Limited, for authority to increase the charges for Business and Residence Service in the Towns of Haileybury, New Liskeard, Englehart and Charlton, by an addition of $5.00 per annum to the present rates.

Also for authority to increase the charges for Rural Telephone Service at all points on the Company's System by the addition of $5.00 per annum.

REPORT.

The undersigned having considered the evidence submitted at the Hearing in this matter, and having studied the various documents filed, submits the following for the consideration of the Board.

An analysis of the Applicant's Annual Reports for the ten years ending December 31st, 1919, shows that after paying all expenses incident to the operation, management and maintenance of the system, the following sums were paid in dividends, and set aside for depreciation, leaving at the end of that period a substantial surplus:

Year	Net Revenue	Depreciation	Dividend	Surplus	Deficits
1910	$15,933.96	$4,464.84	....	$11,469.12	......
1911	16,416.09	7,341 34	1,600.48	7,474.27	......
1912	12,505.96	8,788.55	3,351.32	366.09	......
1913	12,593.98	5,851.80	4,009.92	2,732.26	......
1914	17,054.51	6,098.77	4,009.92	6,945.82	......
1915	14,494.28	7,346.20	4,009.92	3,138.16	......
1916	11,928.99	8,427.96	4,009.92	....	508.89
1917	13,002.23	8,668.12	4,072.66	261.45	......
1918	12,955.28	7,832.22	4,272.88	850.18	......
1919	12,527.98	8,481.91	4,276.88	....	230.81
	$139,413.26	$73,301.71	$33,613.90	$33,237.35	$739.70
		Less deficit	....	739.70	
				$32,497.65	

During the period under review the Applicant has paid an amount in dividends equal to 6.62% per annum on the paid-up stock, has set aside an average of 7.38% per annum upon the total plant investment for depreciation, and has carried forward to surplus the sum of $32,497.65. For the past eight years a dividend of 8% per annum has been paid to the shareholders. This notwithstanding the fact that during the last four years $8,272.11 has been expended upon litigation with the town of Cobalt, for which the subscribers were in no way responsible. The deficits of 1916 and 1919 and the diminished surpluses of 1917 and 1918 are due to this expenditure upon litigation and increased amounts set aside for depreciation. The cost of litigation in these years being: 1916,$517.26; 1917, $1,083.52; 1918, $3,063.84; 1919, $3,607.49; as compared with an average of $200.00 per annum for the previous six years. These excess law costs are no part of the operating expense and therefore should not be a charge against revenue, but should be taken out of the Applicant's Emergency Revenue of $25,000 as shown in the 1919 Report.

The Applicant's Report for the year 1919 shows a liability to its shareholders of $53,461.00, and to bondholders $20,000.00, or a total fixed liability of $73,461.00 against which there are fixed assets of $128,529.76, leaving surplus assets of $55,068.76. After deducting the outstanding bonds, the interest upon which is charged in the maintenance expenses, the net revenue for 1919 was 11.63% of the remaining total assets of $108,529.76, which after providing 5% depreciation leaves 6.63% upon $108,529.76, or 11.41% on the total paid up stock. It must further be noted that in this year $3,607.49, an amount equal to 6.75% on the paid up stock, was expended upon the litigation referred to.

The Applicant bases its claim for authority to increase its charges upon the following grounds:

1. The proposed installation of two new switchboards at an estimated cost of $15,000;

2. Increased cost of operation.

Dealing with the first ground it would appear that within the past ten years the Applicant has taken out of revenue $73,301.71 to provide for depreciation. No evidence has however been submitted to show what disposition has been made of this money, the provisions of Section 93 of "The Ontario Telephone Act" not having been complied with. If this money has been expended upon new construction the requisite authority has not been obtained and as the 1919 report of the Applicant shows cash assets of only $156.10 it is clear that no portion of this apparent reserve is on deposit in any bank Whatever disposition may have been made of this money it is clear that the replacement of wornout or inadequate switchboards is one of the purposes for which it was set aside. That being so the Applicant cannot claim this proposed expenditure as a reason for increasing its charges to subscribers who furnished the revenue against which this large provision for depreciation has already been charged. If a company is authorized to charge rates based upon the production of a revenue sufficient to provide a depreciation reserve, after having set aside such reserve for a number of years it cannot claim replacement of equipment as a reason for increasing its charges. It must further be borne in mind that in addition to $73,301.71 taken out of revenue for depreciation a surplus of $32,497.65 has apparently been expended upon new construction, making a total of $105,799.36, or 198% of the paid up stock provided in ten years out of the present charges over and above the cost of operation and dividends.

Dealing with the second application submitted the estimates show an additional operating expenditure of $7,000.00 per annum. It is, however, doubtful whether this estimate will be borne out by actual results, but assuming it to be correct it would appear that the legal expenses in 1920 will be reduced by at least $3,400.00, making the net increase in expenses $3,600.00. The average yearly addition to revenue since 1913, that being the year in which the Applicant obtained connection with the T. & N. O. Railway and the "Bell," long distance systems have been $2,880.00, the increase of 1919 over 1918 being $4,805.47. It is therefore fair to assume that this year's interest will amount to the first-named sum. Taking these figures and the Applicant's 1919 statement as a basis for computation at the existing charges we have the following result:

1919 Receipts		$50,683.72	
Estimated additional revenue		2,880.00	$53,563.72
1919 Expenditure		38,155.74	
Estimated increased expenditure		7,000.00	
		45,155.74	
Less Saving in Law Costs		3,400.00	41,755.74
Net Revenue			$11,807.98
Dividends at 8%	$4,276.88		
Depreciation 5% on 1919 Plant and Equipment	5,714.73		$9,991.61
Surplus			$1,816.37

In view of the foregoing it is clear that the Applicant is in a position to continue its operations at the present charges without embarrassment for this year at least, and therefore no necessity exists for authorizing a further increase based upon estimates. If at the close of this year's operation the Applicant can furnish evidence, supported by proof of actual expenditures, that additional revenue is required, this application might be renewed. In such an event, however, the Applicant should be required to furnish, in addition to other material evidence, detailed particulars covering the handling of its depreciation reserve during the past ten years.

No consideration has been given to the matter of securing additional capital for the Applicant's undertaking, this not being pertinent to the application. In view, however, of the fact that, owing to the transfer of large sums from revenue to capital account, the assets are nearly two and one-half times the total paid up stock, this problem should not be a difficult one to solve. In any event the charges for service by public utilities are intended to cover cost of operation, depreciation and interest on the investment, not the provision of additional capital.

Yours truly,

(Sgd.) F. DAGGER,
Electrical and Telephone Expert.

I agree.
(Sgd.) D. M. McI.
(Sgd.) A. B. I.

August 17th, 1920.

ORDER.

Upon the application of the above named Applicant, upon hearing the evidence adduced on behalf of all parties, and upon reading Statements of Assets and Liabilities, Receipts and Disbursements, and other documents filed,

The Board orders that the Application of the Applicant be and the same is hereby dismissed.

And it is further ordered that if the Applicant is in a position to furnish evidence, supported by proof of its actual expenditures during the year 1920, that its revenue is insufficient to cover the cost of operation, maintenance and management, to provide a Depreciation Reserve at the rate of Five per cent. upon the total cost of plant and equipment, and to pay a reasonable dividend to its shareholders, this Application may be renewed at any time after January 1st, 1921.

And the Board makes no order for costs, save and except that the Applicant shall pay $10.00 for the law stamps required for this Order.

(Sgd.) D. M. McINTYRE,
Chairman.
(Seal).

PROCEDURE FILE 5795.

Re Bill No. 26 (1920).

"An Act respecting the Town of Orangeville."

March 24th. Above Bill and Petition therefor referred to the Board under Rule 61a of the House.

April 6th. Hearing, 3 to 3.30 p.m. Term of debentures to be reduced from 20 to 5 years; last part of section 4 of Bill to be struck out; Town Solicitor to consult with Council and advise Board re rate of interest.

April 12th. Report issued in favor of passing of Bill with amendments as directed by Board.

To the Honourable, The Legislative Assembly
of the Province of Ontario.

Gentlemen:

Upon the reference, under Rule 61 (a) of Your Honourable House to The Ontario Railway and Municipal Board, of Bill No. 26 (1920), intituled: 'An Act respecting the Town of Orangeville," the Board begs leave respectfully to report that in the judgment of the Board it is reasonable that such Bill should be passed by your Honourable House, provided it is amended as shown in the copy of such Bill annexed hereto.

The indebtedness of $12,000.00 referred to in the Bill is for expenditures which should have been paid out of the taxes, and for this reason the Board recommends that the period for which the debentures be issued be reduced from twenty years to five years.

All which is respectfully submitted.

(Sgd.) D. M. McINTYRE,
Chairman.
(Sgd.) A. B. INGRAM,
Vice-Chairman.
(Sgd.) J. A. ELLIS,
Commissioner.

Dated at Toronto this 21st day of April, 1920.

PROCEDURE FILE 5796.

Re Bill No. 28 (1920).

"An Act respecting the Town of Burlington.

March 24th. Above Bill and Petition therefor referred to the Board under Rule 61a of the House.

April 6th. Hearing, 3.30 to 4 p.m. New By-law to be passed making debenture term 5 years and to be substituted for present one as Schedule to Bill. Stands pending receipt of new By-law.

April 12th. Amending By-law filed.

April 12th. Report issued in favour of passing of above Bill if amended as directed by the Board.

To the Honourable, The Legislative Assembly
of the Province of Ontario.

Gentlemen:

Upon the reference, under Rule 61 (a) of Your Honourable House to The Ontario Railway and Municipal Board, of Bill No. 38 (1920), intituled: "An Act respecting the Town of Burlington," the Board begs leave respectfully to report that in the judgment of the Board it is reasonable that such Bill should be passed by your Honourable House, provided it is amended in the following particulars:

In Sections 1 and 2 substitute the words "By-law No. 409" for the words "By-law No. 402." Strike out Schedule "A" and substitute therefor the By-law No. 409 attached to the Bill.

The indebtedness of $8,100.00 referred to in the Bill is largely for expenditures which should have been paid out of the taxes, and for this reason the Board recommends that the period for which the debentures be issued be reduced from ten years to five years.

All which is respectfully submitted.

(Sgd.) D. M. McIntyre,
Chairman.

(Sgd.) A. B. Ingram,
Vice-Chairman.

(Sgd.) J. A. Ellis,
Commissioner.

Dated at Toronto this 12th day of April, 1920.

Procedure File 5802.

Application by The Mount Albert Telephone Company, Limited, under section 88 of "The Ontario Telephone Act, 1918," for authority to increase charges for telephone service.

March 26th. Application filed.

March 29th. Letter for further material.

Oct. 7th. Further material filed.

Oct. 15th. Hearing.—Adjourned to Dec. 15th, 1920.

Dec. 15th. Hearing continued. Adjourned.

Procedure File 5806.

In the Matter of the Application of the City of Peterborough, under section 10, Chap. 41, Ontario Statutes, 1918," for an Order prescribing the manner of construction of the Sewage Disposal Plant; terms and conditions (if any) in respect of operation of same and compensation to be paid for site. (See P.F. 5424).

March 30th. Application and material filed.

April 16th. Preliminary Hearing, pursuant to Appointment, 11 to 11.45 a.m., and 12.15 to 1 p.m. Order for work in accordance with plans and specifications. Order to be drawn by Mr. Widdifield (City Solicitor), draft to be approved by Mr. Kerr (Solicitor for Township Otonabee, et al), Mr. Strickland and Mr. Eastwood (Solicitors for adjacent owners. Order to reserve questions that may arise under "The Public Health Act" (and 1918 amendments); Order to allow City to go on the land; Work to be performed under the plans, etc., as approved (or altered from time to time) by the Provincial Board of Health. Plans and specifications to be ready for contractor within two weeks and approved by the Provincial Board of Health and filed with the Board. (See Reporter's Notes).

May 7th. Order issued in form of draft filed.

April 16th, 1920.

ORDER.

Upon the application of the Corporation of the City of Peterborough, appearing by its Solicitor, and in presence of Counsel for the Corporation of the Township of Otonabee, the Local Board of Health of the Township of Otonabee, the Corporation of the Township of North Monaghan, the Local Board of Health of the Township of North Monaghan, the Corporation of the Township of South Monaghan and the Local Board of Health of the Township of South Monaghan and C. W. Russell and Walter Brommell and H. P. Kennedy, Limited, and it being proved to the satisfaction of the Board by a Statutory Declaration that a true copy of the Appointment for this Application had been served upon Vincent Eastwood, Esq., agent for A. R. Wilson, and upon hearing Counsel for the Corporation of the City of Peterborough and the above mentioned Townships and Local Boards of Health and the said C. W. Russell and Walter Brommell and H. P. Kennedy, Limited, and no one appearing for the said A. R. Wilson, though duly notified as aforesaid;

The Board orders:

1. The Corporation of the City of Peterborough may carry on the construction of a Sewage Disposal Plant in accordance with the plans and specifications filed this date with this Board by the said Corporation of the City of Peterborough or as said plans and specifications may be amended or varied from time to time by the Provincial Board of Health.

2. The Corporation of the City of Peterborough, its officers, servants, employees and agents, may as soon as the hereinafter described lands are expropriated by the said City in accordance with the provisions of the Municipal Act, enter upon the following lands, that is to say:

All and singular that certain parcel or tract of land and premises, situate, lying and being in the Township of Otonabee, in the County of Peterborough, and being composed of part of Lot Number Twenty-five (25) in the Fourteenth Concession of the said Township of Otonabee in the County of Peterborough and Province of Ontario, which said parcel or tract of land is more particularly described as follows: Commencing at a point in the Easterly limit of said Lot Number Twenty-five, distant two hundred and ninety-eight feet and ten inches measured northerly along said easterly limit of said Lot Number Twenty-five from the south-easterly angle thereof, thence south seventy-three degrees and twenty minutes west and parallel to the southerly limit of said Lot Number Twenty-five, three thousand seven hundred and ninety-eight feet more or less to the water's edge of the Otonabee River, thence north easterly along the water's edge of the said Otonabee River two thousand five hundred and forty feet more or less to a point distant sixteen hundred and ninety-six feet and seven and one-half inches westerly from and measured on a line drawn at right angles to the easterly limit of said Lot

Number Twenty-five; thence south sixteen degrees and forty minutes east and parallel to the easterly limit of said Lot Number Twenty-five, twelve hundred feet more or less to a point distant three hundred and eighteen feet and ten inches northerly from and measured on a line drawn at right angles to the southerly limit of said Lot Number Twenty-five; thence north seventy three degrees and twenty minutes east and parallel to the southerly limit of said Lot Number Twenty-five, sixteen hundred and ninety-six feet and seven and one-half inches more or less to the easterly limit of said Lot Number Twenty-five; thence southerly along said easterly limit of said Lot Number Twenty-five, twenty feet to the place of beginning, containing by admeasurement thirty-eight acres be the same more or less, and shall have the power to use such lands for all and any purposes that may be necessary for the due carrying into effect and the completion of the plans and specifications for the construction of a Sewage Disposal Plant.

3. Any Corporation, Company or person who may deem that such Corporation, company or person, may be injuriously affected by or by reason of the construction or operation and maintenance of the said Sewage Disposal Plant may apply at any time hereafter to this Board for compensation therefor and the question of compensation for all or any lands taken or injuriously affected by the construction or operation and maintenance of the said Sewage Disposal Plant is not to be effected by this Order, and the rights of all parties claiming damages are hereby reserved, and all other questions which may subsequently arise under the operation of any Act or Statute affecting the construction or operation and maintenance of the said Sewage Disposal Plant are hereby reserved.

4. The costs of this Application are hereby reserved.

(Sgd.) D. M. McIntyre,
(Seal). Chairman.

Procedure File 5812.

Application by the Township of Monck, under section 33 of "The Ontario Telephone Act, 1918," for an Order determining the validity of a special rate levied upon Lot 26, Concession IX, Township Monck, for telephone service.

April 1st. Application (letter) and material filed.

May 1st. Opinion of the Board delivered.

Opinion of the Board.

In this matter the relevant facts are as follows:

The Petition for the establishment of the system was certified by the Municipal Clerk on 16th February, 1916, and on that date the By-law for the establishment of the system—No. 431—was passed by the Municipal Council, and the name V. J. Heavenor appears in Schedule "A" to the By-law in respect of Lot 26 in the 9th Concession of the Township of Monck. A certified copy of the Assessment Roll of the Township for the year 1916 shows that V. J. Heavenor was assessed as freeholder in respect of the following property:

Lot 26, Concession 9, Plot K.

Lot 26, Concession 9, Plots H and J.

A plan was submitted showing a part of Lot 26 in the 9th Concession of the Township of Monck, subdivided into a number of plots, and amongst them are plots H, J and K. It does not appear that this plan of subdivision has been registered. Plots H, J and K are contiguous, and all abut upon the same road allowance.

The evidence shows that at the date of the passing of By-law No. 431—16th February, 1916—V. J. Heavenor was the owner in fee simple in possession of Plot K subject to a mortgage to one John Walker, and that he had by agreement dated 1st May, 1912, contracted with one Thomas Mears for the purchase of Plots H and J for the sum of $300 for which he had given his promissory notes for $50 each, payable at intervals of a year during six years, and bearing interest at six per cent. per annum, and that he had up to the year 1916 made substantial payments on account of the purchase money. By deed dated 15th April, 1916, it appears that Plots H and J were conveyed to Nellie Heavenor, the wife of V. J. Heavenor. It further appears that V. J. Heavenor was in possession of Plots H, J and K in 1916, when the Petition for the establishment of the system was certified by the Township Clerk, and By-law No. 431 was passed, and that in 1917 the name V. J. Heavenor was placed on the Collector's Roll as a subscriber to the Monck Municipal Telephone System, and was rated for $15.63, which he paid. It also appears that V. J. Heavenor was placed on the general collector's roll for 1918 in respect of Plots H, J and K, but that Joseph Oatley was entered on the special collector's roll for telephone rates for that year for the sum of $14.72, of which he has paid $5.89.

The conclusion to be drawn from these facts is that V. J. Heavenor was, when he signed the petition and when the By-law was passed, owner of the equitable estate in fee simple in Plot K, subject to the mortgage, and had under his contract of purchase an equitable estate in fee simple in Plots H and J, and being assessed as freeholder in respect of all three plots, he was competent as a resident assessed landowner, to sign a petition to the municipal council praying for the establishment of a municipal system (R.S.O., c. 188, s. 9). Having signed a petition V. J. Heavenor became a subscriber and subject to a subscriber's liabilities (R.S.O., c. 188, s. 2 (f). Debentures payable by instalments in ten years having been issued the lands of the petitioners, including V. J. Heavenor, became liable to the special rate levied to meet the debt (R.S.O., c. 188, s. 17). A rate for the cost of maintenance is also chargeable against the subscriber's property under R.S.O., c. 188, s. 14.

The fact that the ownership of those portions of farm Lot 26—Plots H, J and K—formerly owned by V. J. Heavenor, has been severed cannot affect the liability of any portion to be rated for the telephone rate. Nor is the question affected by the fact that the telephone was installed on Plots H and J and never on Plot K, as the petition signed by V. J. Heavenor states that he petitioned as owner of part of Township Lot No. 26 without designating any one of the three plots which he owned as the land in respect of which he petitioned; the result being that his entire holding of Lot 26 in the 9th Concession became chargeable.

The finding of the Board is that the rate chargeable to V. J. Heavenor and to his successors in title is chargeable against Plots H, J and K, and if the ownership is severed that the rate should be apportioned against these plots according to their several assessed values. This rate includes not only principal and interest in respect of the debt, but also the cost of maintenance whether the telephone continues to be installed and used or not.

There will be no costs to either party, and no fee for law stamps on the Order.

(Sgd.) D. M. McIntyre,
Chairman.

Dated at Toronto the 21st day of May, A.D. 1920.

PROCEDURE FILE 5819.

Re Bill No. 40 (1920).

"An Act respecting the Town of Cobourg."

April 7th. Above Bill and Petition therefor referred to the Board under Rule 61a of the House.

April 13th. Report issued in favor of passing of Bill if amended in accordance with the Board's directions.

To The Honourable, The Legislative Assembly
of the Province of Ontario.

Gentlemen:

Upon the reference, under Rule 61 (a) of Your Honourable House to The Ontario Railway and Municipal Board, of Bill No. 40 (1920), intituled: "An Act respecting the Town of Cobourg," the Board begs leave respectfully to report that in the judgment of the Board it is reasonable that such Bill should be passed by your Honourable House, provided it is amended as shown in the copy of such Bill annexed hereto.

The indebtedness of $25,000.00 referred to in the Bill is largely for expenditures which should have been paid out of the taxes, and for this reason the Board recommends that the period for which the debentures be issued be reduced from thirty years to five years.

All which is respectfully submitted.

(Sgd.) D. M. McINTYRE,
Chairman.

(Sgd.) J. A. ELLIS,
Commissioner.

Dated at Toronto this 13th day of April, 1920.

PROCEDURE FILE 5824.

Application by the Town of Walkerville, under section 21 of "The Municipal Act," for annexation thereto of part Township Sandwich East (Petition Walker Sons, Limited).

April 12th. Petition, certified copy of Resolution of Town Council, and material filed.

May 27th. Hearing, pursuant to Appointment, 10.30 a.m. to 2.30 p.m., Town Hall, Walkerville. Judgment reserved.

June 7th. Judgment delivered granting annexation as applied for.

June 23rd. Copy of City of Windsor's Petition to Lieutenant-Governor in Council, to vary Board's Judgment herein, filed.

Aug. 16th. Order issued in form of draft filed.

OPINION OF THE BOARD.

This is a petition by certain municipal electors of the Township of Sandwich East praying that all those parts of Lots 92, 93, 94, 95, 96, 97 and 98, in the Second Concession of the Township of Sandwich East lying north of the Canadian Pacific Railway, be annexed to the Town of Walkerville. The district sought to be annexed contains 540 1/10 acres, and is adjacent to the

Town of Walkerville. The resolution that it is expedient that the annexation should be made has been passed by the Council of the Town of Walkerville. All notices to necessary parties of this proceeding have been given as required by Section 21 of "The Municipal Act." The petition is proved to have been signed by a large majority of the municipal electors in the part of the Township of Sandwich East proposed to be annexed. If an Order for annexation is made as sought there will be no violation of the provisions of Section 14 of "The Municipal Act" as to acreage of the town and density of population.

All formalities required by law having been fully complied with it remains to consider the only substantial objection to the annexation raised at the Hearing. A reference to the plan of the district which it is proposed to annex to the Town of Walkerville shows that the portions of two lots included in the district—Lots 92 and 93—overlap the southerly boundary of the City of Windsor which at that point is formed by the Tecumseh Road, which Road forms also the southerly boundary of the Town of Walkerville. The boundaries of the City and Town are coterminous from the Detroit River southerly to the Tecumseh Road, and are a straight line. The contention of the City of Windsor is that in case of further extension southerly of either the City or Town or both, the east limit of Windsor and the west limit of Walkerville should be the prolongation of the straight line which forms the dividing line between them at present. This contention logically leads to the conclusion that the City of Windsor should not be extended east nor the Town of Walkerville west of that boundary line prolonged southerly. The Board is not impressed by this contention. There is of course much to be said for the maintenance of regular, symmetrical boundaries between municipalities, but convenience also should be considered, and the convenience especially of the lands to be annexed, and the residents of those lands. As mentioned above a large majority of the municipal electors have petitioned that the annexation be made, and they have supported the prayer of the petition by evidence which satisfies the Board that the convenience of the residents of the district will be furthered, and the development of the district industrially and residentially hastened by the proposed annexation. A large industrial corporation has located in the Town of Walkerville which now has a payroll of 1,000 employees, which it is expected will shortly be doubled. Housing accommodation for the work people is as in most urban communities, far short of the demand, and this industrial corporation has acquired this large block of land to form the site of a residential annex. It will be more convenient in the carrying out of the project if the entire block is incorporated in one municipality than if it is severed and part is situate in one and part in another. The parts of Lots 92 and 93 which overlap Windsor's southerly boundary do so to the extent of some 1,600 feet only, so that there is ample scope for the future expansion of the City of Windsor southerly from the Tecumseh Road.

There will be an Order for the annexation as prayed in the petition.

There will be no costs to either party, but the Corporation of the Town of Walkerville will pay $15.00 in law stamps on the Order.

(Sgd.) D. M. McIntyre,
Chairman.

Dated at Toronto the 5th day of June, A.D. 1920.

June 5th, 1920.

ORDER.

Upon the Petition of certain Municipal electors of the Township of Sandwich East, in the County of Essex, praying that all those parts of Lots 92, 93, 94, 95, 96, 97, 98, in the second concession of the Township of Sandwich East, lying north of the Canadian Pacific Railway, and hereinafter more particularly described, be annexed to the Town of Walkerville and upon reading the affidavits and exhibits filed and upon hearing the evidence adduced at the hearing at the Town of Walkerville on the 27th day of May, 1920, and it appearing that the requirements of section 21 of "The Municipal Act" have been complied with and that notice of this Hearing has been duly served and published, and upon hearing Counsel for the City of Windsor, Town of Walkerville, Town of Ford and the Township of Sandwich East and judgment having been reserved until this day,

1. This Board doth order that all and singular that certain parcel or tract of land and premises situate, lying and being in the Township of Sandwich East, County of Essex and Province of Ontario, containing by admeasurement Five hundred and forty and one-tenth acres more or less; being composed of parts of Farm Lots 92, 93,94, 95, 96, 97 and 98, in the second concession of the Township of Sandwich East, which may be more particularly described as follows: Commencing at a point where the westerly limit of Farm Lot Ninety-two intersects the centre line of the Tecumseh or Second Concession Road; thence easterly along said centre line of the Tecumseh Road, Five thousand three hundred and seventy (5370) feet more or less to a point said point being at the intersection of the easterly limit of Farm Lot 98 with the aforementioned centre line of Tecumseh Road; thence south-easterly along the easterly limit of Farm Lots 98 Five thousand two hundred and ninety-one and eight-tenths (5291.8) feet more or less to the northerly limit of the right of way of the Canadian Pacific Railway; thence westerly along the last mentioned limit of the right of way of the Canadian Pacific Railway Company Five thousand eight hundred and forty-six (5846) feet more or less to the westerly limit of Farm Lot 92, thence north-westerly along said westerly limit of Farm Lot 92 Three thousand six hundred and thirty-seven (3637) feet more or less to the place of beginning, be and the same is hereby annexed to the Town of Walkerville.

2. This Board doth further order that all assets and liabilities as between the said lands annexed and the Township of Sandwich East and the County of Essex shall be adjusted under the provisions of the Municipal Act applicable thereto, in case the parties are unable to agree on such adjustment, as of the first day of January, 1920.

3. This Board doth further order that this Order shall take effect from and after the 15th day of June, 1920.

(Sgd.) D. M. McINTYRE,
(Seal). Chairman.

PROCEDURE FILE 5832.

Application by The Bethesda & Stouffville Telephone Company, Limited, under section 88 of "The Ontario Telephone Act, 1918," for authority to increase charges for telephone service.

April 16th. Application filed.

Oct. 15th. Hearing, pursuant to Appointment, 2 to 5 p.m., Town Hall, Stouffville.

Nov. 22nd. Order.

November 22nd, 1920.

ORDER.

Upon the application of the above named Applicant, and upon reading the Report of Donald M. McIntyre, Esquire, K.C., who heard the evidence adduced on behalf of all parties, Statements of Assets and Liabilities, Receipts and Disbursements and other material filed,

The Board orders, subject to the several conditions prescribed in this Order, that leave be granted to the Applicant to charge the under-mentioned tariff charges for telephone service, to take effect as from November 1st, 1920.

For Individual Line Local Service:	
Within the corporate limits of Stouffville or Claremont	$23.50 per annum
Outside the corporate limits of Stouffville or Claremont but not exceeding one and one-quarter miles from the Central Office	$37.00 per annum
For Two-Party Line Service	$21.00 per annum
For Rural Party Line Service	$18.50 per annum
The above named charges to be subject to a discount at the rate of $2.00 per annum on all amounts paid within thirty days from the date of rendering the account for same.	
For a Desk in lieu of a Wall Telephone	$2.00 additional per annum
For an Extension Bell	$2.50 per annum

The Board furthers orders:

1. That for the purpose of providing a fund to meet the cost of the renewal of its plant and equipment, the Applicant shall on December 31st, 1921, and each year thereafter set aside out of its earnings a sum equal to not less than Five per cent. of the total value of the plant and equipment used in the Applicant's business on December 31st in each such year. The fund so provided shall, unless otherwise authorized by the Board, be applied exclusively to the cost of renewing such portion of the said plant and equipment as may from time to time be rendered necessary by depreciation or obsolescence, and after deducting therefrom such amounts as may have been so expended in any one year the residual amount shall be deposited in a chartered bank at interest, and the money so deposited may, with the approval of the Board, be expended in new construction, or extensions or additions to the property of the company, or, with the like approval, may be invested in interest-bearing securities; and all interest accruing from any portion of the depreciation fund so deposited or invested, and such portion of the earnings fixed by the Board as attributable to the moneys so expended in new construction, extensions or additions, shall from time to time be carried to the credit of the said fund.

2. That the Applicant shall on or before the Fifteenth day of January in each year furnish the Board with a report setting forth (a) the total amount standing at the credit of the fund referred to in Clause 1 hereof on the last day of December in the preceding year; (b) the amount of such fund which has been temporarily used in the purchase of securities; (c) the names and values of the securities so purchased, together with (d) a certified statement from the Bank in which the fund is deposited, showing the amount standing at the credit of such fund on the last named date.

3. That the Applicant shall keep separate records of all expenditures upon the construction, operation, maintenance and renewal of its plant and equipment and shall each year furnish its subscribers with an annual report and balance sheet in the form approved of by this Board as set forth on pages 141 to 144 of "Telephone Systems, 1919."

And the Board makes no order for costs, save and except that the Applicant shall pay $10.00 for the law stamps required for this Order.

(Sgd.) D. M. McIntyre,
(Seal). Chairman.

Procedure File 5834.

Application by The Erie Telephone Company, Limited, under section 88 of "The Ontario Telephone Act, 1918," for authority to increase charges for service.

April 16th. Application (letter) filed.

Oct. 11th. Hearing, pursuant to Appointment, 1.15 to 3 p.m., Town Hall, Cayuga.

Nov. 22nd. Order.

November 22nd, 1920.

Order.

Upon the application of the above named Applicant, and upon reading the Report of Donald M. McIntyre, Esquire, K.C., who heard the evidence adduced on behalf of all parties, Statements of Assets and Liabilities, Receipts and Disbursements and other material filed,

The Board orders, subject to the several conditions prescribed in this Order, that leave be granted to the Applicant to charge the under-mentioned tariff charges for telephone service, to take effect as from November 1st, 1920:

For Business Telephones on Individual Lines:	$25.00 per annum
For Residence Telephones on Individual Lines:	$22.50 per annum
For Rural Party Line Service: - - - -	$18.75 per annum

And the Board further orders:

1. That the said tariff charges be subject to a discount of 20 per cent. on all amounts paid within thirty days from the date of rendering the account for same.

2. That the Applicant shall establish continuous day and night service, including Sundays and holidays.

3. That for the purpose of providing a fund to meet the cost of the renewal of its plant and equipment, the Applicant shall on December 31st, 1921, and each year thereafter set aside out of its earnings a sum equal to not less than five per cent. of the total value of the plant and equipment used in the Applicant's business on December 31st in each such year. The fund so provided shall, unless otherwise authorized by the Board, be applied exclusively to the cost of renewing such portion of the said plant and equipment as may from time to time be rendered necessary by depreciation or obsolescence, and after deducting therefrom such amounts as may have been so expended in any one year the residual amount shall be deposited in a chartered bank at interest and the money so deposited may, with the approval of the Board, be expended in new construction, or extensions or additions to the property of the company, or with the like approval, may

be invested in interest-bearing securities; and all interest accruing from any portion of the depreciation fund so deposited or invested, and such portion of the earnings fixed by the Board as attributable to the moneys so expended in new construction, extensions or additions, shall from time to time be carried to the credit of the said fund.

4. That the Applicant shall on or before the fifteenth day of January in each year furnish the Board with a report setting forth (a) the total amount standing at the credit of the fund referred to in Clause 3 hereof on the last day of December in the preceding year; (b) the amount of such fund which has been temporarily used in the purchase of securities; (c) the names and values of the securities so purchased, together with (d) a certified statement from the bank in which the fund is deposited, showing the amount standing at the credit of such fund on the last named date.

5. That the Applicant shall keep separate records of all expenditures upon the construction, operation, maintenance and renewal of its plant and equipment and shall each year furnish its subscribers with an annual report and balance sheet in the form approved of by this Board as set forth on pages 141 to 144 of "Telephone Systems, 1919."

And the Board makes no order for costs, save and except that the Applicant shall pay $10.00 for the law stamps required for this Order.

(Sgd.) D. M. McIntyre,
(Seal). Chairman.

PROCEDURE FILE 5836.

Application by The Metcalfe Rural Telephone Company, Limited, under section 88 of "The Ontario Telephone Act, 1918," for authority to increase charges for service.

April 16th. Application (letter) filed.

April 30th. Hearing, 10.30 a.m., Court House, Ottawa, pursuant to Appointment. Applicant to furnish detailed particulars of expenditures upon construction and maintenance.

July 22nd. Order.

July 22nd, 1920.

ORDER.

Upon the application of the above named Applicant, and upon reading the Report of J. A. Ellis, Esquire, who heard the evidence adduced on behalf of all parties, Statements of Assets and Liabilities, Receipts and Disbursements and other material filed,

The Board orders, subject to the further provisions of this Order, than the Applicant, The Metcalfe Rural Telephone Company, Limited, be authorized to make the following charges for telephone service, to take effect as from July 1st, 1920:

For Individual Line Service	$18.00 per annum
For Rural Party Line Service	$15.00 per annum

And it is further ordered:

1. The additional charge herein authorized of Three Dollars per annum for the six months ending December 31st, 1920, shall not be due and payable until January 1st, 1921.

2. The Applicant shall take immediate steps to thoroughly overhaul its system and shall execute such reconstruction and repairs to its wires, poles, central office equipment and subscribers' stations, including battery renewals, as may be necessary to enable the furnishing of an efficient service to its subscribers.

3. The Applicant shall rearrange its party line circuits, wherever required, in such manner as to provide that there shall not be more than fifteen subscribers' stations connected upon any one circuit, except in so far as this provision may be varied by the Board or its Electrical and Telephone Expert.

4. The Applicant shall establish a continuous day and night service, including Sundays and Holidays. Provided, however, that between the hours of 10 p.m. and 6 a.m. from April 1st to September 30th, and between the hours of 9 p.m. and 7 a.m. from October 1st to March 31st in any year the Applicant may restrict such service to such emergencies as fire, accidents or calls for medical, veterinary or police aid.

5. The charges provided herein shall only become effective upon the Board's Electrical and Telephone Expert furnishing his certificate to the effect that the provisions of Clauses 2, 3 and 4 hereof have been reasonably complied with.

6. That for the purpose of providing a fund to meet the cost of the renewal of its plant and equipment, the Applicant shall on December 31st, 1921, and each year thereafter set aside out of its earnings a sum equal to not less than five per cent. of the total value of the plant and equipment used in the Applicant's business on December 31st in each such year. The fund so provided shall, unless otherwise authorized by the Board, be applied exclusively to the cost of renewing such portion of the said plant and equipment as may from time to time be rendered necessary by depreciation or obsolescence, and after deducting therefrom such amounts as may have been so expended in any one year the residual amount shall be deposited in a chartered bank at interest and the money so deposited may, with the approval of the Board, be expended in new construction or extensions or additions to the property of the company, or with the like approval, may be invested in interest-bearing securities; and all interest accruing from any portion of the depreciation fund so deposited or invested, and such portion of the earnings fixed by the Board as attributable to the monies so expended in new construction, extensions or additions, shall from time to time be carried to the credit of the said fund.

7. The Applicant shall on or before the fifteenth day of January in each year, furnish the Board with a Report setting forth: (a) The total amount standing at the credit of the fund referred to in clause 6 hereof on the 31st day of December in the preceding year; (b) The amount of such fund which has been temporarily used in the purchase of securities; (c)The names and values of the securities so purchased, together with (d) a certified statement from the bank in which the fund is deposited, showing the amount standing at the credit of such fund on the last named date.

8. The Applicant shall keep separate records of all expenditures upon the construction, operation, maintenance and renewal of its plant and equipment and shall each year furnish its shareholders with an annual report and balance sheet in the form approved of by this Board as set forth on pages 141 to 144 of "Telephone Systems, 1919."

And the Board makes no order for costs, save and except that the Applicant shall pay $10.00 for the law stamps required for this Order.

(Sgd.) D. M. McIntyre,
Chairman.

(Seal).

PROCEDURE FILE 5861.

In the Matter of the Petition of Joseph Pope, et al, under section 9 of "The Local Improvement Act," against the proposed construction of a Tarvia Macadam pavement on Stewart Street, between Chapel Street and Charlotte Street, in the City of Ottawa.

April 23rd. Petition filed.

May 7th. Hearing, pursuant to Appointment, 10.30 a.m., Council Chamber, City Hall, Ottawa.

May 29th. Order.

May 29th, 1920.

ORDER.

The Petition of Joseph Pope and others against the construction as a Local Improvement of a tarvia macadam pavement on Stewart Street, between Chapel and Charlotte Streets in the City of Ottawa, having come on to be heard before a special sittings of this Board held at the City of Ottawa on Friday the 7th day of May, 1920, at the hour of 10.30 o'clock in the forenoon, in the presence of the said Petitioners and of the Commissioner of Works and the Solicitor for the City of Ottawa, upon hearing what was alleged both in support of, and in opposition to, the construction of the said pavement, and upon the said Corporation undertaking by the said Commissioner of Works, that it will not proceed with the construction of the said pavement during the present calender year;

1. The Board orders and directs that the said Petition be, and the same is hereby, dismissed.

2. The Board directs that its fee be fixed at the sum of $10.00 to be affixed in law stamps to this Order, and that the said amount may be added to the costs of the said Local Improvement work when proceeded with.

(Sgd.) D. M. MCINTYRE,
Chairman.

(Seal).

PROCEDURE FILE 5867.

In the Matter of the Petition of Geo. G. Ross, et al, under section 9 of "The Local Improvement Act," against the construction of a sidewalk on Chapel Street West, between Laurier Avenue and Wilbrod Street, in the City of Ottawa.

April 26th. Petition filed.

May 7th. Hearing, pursuant to Appointment, 10.30 a.m., Council Chamber, City Hall, Ottawa.

May 10th. Commissioner's Report filed.

May 10th. Judgment delivered. Surface of existing sidewalk to be reconstructed and levelled at an estimated cost of $200.

May 12th. Order.

REPORT.

A cement sidewalk at present exists where it is proposed to lay the side walk. It is alleged, however, that the frost has injured the present sidewalk and lifted one side of it so that it is now on a dangerous incline. The proposed local improvement work was the complete destruction of the existing sidewalk and the laying of a new one at an estimated cost of $650.00. After discussion at the Hearing, however, the Civic authorities undertook to merely reconstruct the surface of the existing sidewalk and level it at an estimated cost of $200.00. This they considered would enable the sidewalk to be made quite safe.

Upon this understanding I recommend that the Petition be dismissed.

(Sgd.) J. A. Ellis,
Commissioner.

Toronto, May 10th, 1920.

May 7th, 1920.

Order.

The above Petition having come on to be heard before a special sittings of this Board, held at the City of Ottawa on the Seventh day of May, 1920, in the presence of the Petitioners, and of the Solicitor for the Corporation of the City of Ottawa. Upon hearing what was alleged by the said parties respectively, in opposition to, and in support of, the construction of the said work, and the Corporation undertaking to withdraw the Local Improvement Report for the construction of the said work, and to substitute therefor a Report authorizing the reconstructing and levelling of the surface of the existing walk, at an estimated cost not exceeding $200.00;

1. The Board orders and directs that the said Petition should be, and the same is hereby, dismissed.

2. The Board further orders that the costs of the said Hearing, fixed a the sum of $10.00, be paid by the Corporation of the City of Ottawa in law stamps, and that the said Corporation may charge the said amount as part of the cost of the said work, under the provisions of The "Local Improvement Act."

(Sgd.) D. M. McIntyre,
(Seal). Chairman.

Procedure File 5868.

Application by H. C. Layman, under section 87 of "The Ontario Telephone Act, 1918," for approval of sale of "The South Gosfield Telephone System" to The Bell Telephone Company of Canada, Limited.

April 26th. Application (letter) filed.

June 15th. Hearing, pursuant to Appointment, 10.30 a.m., Town Hall, Kingsville. Approval recommended.

June 24th. Order.

June 24th, 1920.

Order.

Upon the application of the above named Applicant, upon hearing the evidence adduced on behalf of the Applicant and other parties interested, and upon reading the said Application and other material on file,

The Board orders that the sale and transfer by the Applicant of its plant, equipment, business and assets to The Bell Telephone Company of Canada, Limited, be and the same is hereby approved.

And the Board makes no order as to costs, save and except that the Applicant shall pay $10.00 for the law stamps required for this Order.

(Sgd.) D. M. McIntyre,
(Seal). Chairman.

PROCEDURE FILE 5877.

In the Matter of the Petition of Robt. Law, et al, under section 9 of "The Local Improvement Act," against the construction of a 5 foot concrete walk on the east side of King Edward Avenue, from Osgoode Street to Laurier Avenue East, in the City of Ottawa.

April 29th. Petition filed.

May 14th. Hearing, pursuant to Appointment, 10 to 10.45 a.m., Council Chamber, City Hall, Ottawa. Local Improvement withdrawn. New Report to be prepared leaving out Lots 8, 9 and 10, and new Report to provide only for levelling and resurfacing present sidewalk.

PROCEDURE FILE 5892.

In the Matter of sections 60 and 61 of Chap. 186, R.S.O., 1914, and in the Matter of Strike of Street Railway Employees at London, Ontario. (London Street Railway Company).

May 1st. Employees on strike due to the inability of the Company to accede to the demands of its employees as to wages for the year commencing May 1st, 1920.

May 4th. 2.30 p.m. Board received telegram asking its intervention and proceeded to London same day.

May 5th. Board took possession of Railway and arranged with the employees for a resumption of service May 6th. An audit of the books to be made and a report to be submitted to the City Council.

May 18th. Board submitted printed Report to City Council.

June 8th. Employees again on strike as City Council was unable to determine on a policy of relief whereby the Board could meet the increase in wages demanded.

June 16th. After strike of 8 days service again resumed under agreement with the Board whereby employees received an increase of 4 cents per hour to be increased as revenues warranted, to a maximum increase of 8 cents per hour.

Dec. 31st. The Railway is at this date in possession of the Board, Mr A. B. Ingram, Vice-Chairman of the Board, being Operating Manager.

PROCEDURE FILE 5902.

Application by The Woodbridge & Vaughan Telephone Company, Limited, under section 88 of "The Ontario Telephone Act, 1918," for authority to increase charges for service.

May 7th. Application, etc., filed.

June 11th. Hearing, pursuant to Appointment, 10 to 11 a.m., Public Library, Woodbridge. Approval recommended.

June 17th. Order.

June 21st, 1920.

ORDER.

Upon the application of the above named Applicant, and upon reading the Report of Donald M. McIntyre, Esquire, K.C., Chairman, who heard the evidence on behalf of all parties, Statements of Assets and Liabilities, Receipts and Disbursements, and other material filed,

The Board orders that the Applicant, The Woodbridge and Vaughan Telephone Company, Limited, be authorized to make the following charges for telephone service, to take effect as from July 1st, 1920:

For Individual Local or Residence Service	$25.00 per annum
For Limited 2 or 4 Party Line Service	$22.50 per annum
For Rural Party Line Service	$18.75 per annum

These charges to be subject to a discount of 20 per cent. on all amounts paid within 30 days of the date of rendering the account for same.

And it is further ordered:

1. That the rates herein authorized shall apply to all persons to whom the Applicant is furnishing service.

2. That for the purpose of providing a fund to meet the cost of the renewal of its plant and equipment, the Applicant shall on December 31st, 1920, and each year thereafter set aside out of its earnings a sum equal to not less than five per cent. of the total value of the plant and equipment used in the Applicant's business on December 31st in each such year. The fund so provided shall, unless otherwise authorized by the Board, be applied exclusively to the cost of renewing such portion of the said plant and equipment as may from time to time be rendered necessary by depreciation or obsolescence, and after deducting therefrom such amounts as may have been so expended in any one year the residual amount shall be deposited in a chartered bank at interest and the money so deposited may, with the approval of the Board, be expended in new constructions or extensions or additions to the property of the company, or with the like approval may be invested in interest-bearing securities; and all interest accruing from any portion of the depreciation fund so deposited or invested, and such portion of the earnings fixed by the Board as attributable to the moneys so expended in new construction, extensions or additions, shall from time to time be carried to the credit of the said fund.

3. That the Applicant shall on or before the fifteenth day of January in each year, furnish the Board with a Report setting forth: (a) The total amount standing at the credit of the fund referred to in Clause 2 hereof on the 31st day of December in the preceding year; (b) The amount of such fund which has been temporarily used in the purchase of securities; (c) The names and values of the securities so purchased, together with (d) a certified statement from the bank in which the fund is deposited, showing the amount standing at the credit of such fund on the last named date.

4. That the Applicant shall keep separate records of all expenditures upon the construction, operation, maintenance and renewal of its plant and equipment and shall each year furnish its shareholders with an annual report and balance sheet in the form approved of by this Board as set forth on pages 141 to 144 of "Telephone Systems, 1919."

And the Board makes no order for costs, save and except that the Applicant shall pay $10.00 for the law stamps required for this Order.

(Sgd.) D. M. McINTYRE,

(Seal). Chairman.

PROCEDURE FILE 5904.

Application by the Commissioners for the Telephone System of the Municipality of Wellesley, under section 88 of "The Ontario Telephone Act, 1918," for authority to increase "other line" charges for service.

May 7th. Application and material filed.

June 8th. Hearing, pursuant to Appointment, 10.30 to 10.45 a.m., Court House, Kitchener. Application dismissed.

PROCEDURE FILE 5905.

Application by D. S. Austin (trading as "The Murray-Brighton Telephone System"), under section 88 of "The Ontario Telephone Act, 1918," for authority to increase charges for service.

May 7th. Application and material filed.

June 28th. Hearing, pursuant to Appointment, 3 to 4 p.m., Council Chamber, Trenton. Approval recommended.

July 22nd. Order.

July 22nd, 1920.

ORDER.

Upon the application of the above named Applicant, and upon reading the Report of Donald M. McIntyre, Esquire, K.C., who heard the evidence adduced on behalf of all parties, Statements of Assets and Liabilities, Receipts and Disbursements, and other material filed,

The Board orders that the Applicant, D. S. Austin (trading as The Murray-Brighton Telephone System), be authorized to make the following charges for telephone service, to take effect as from July 1st, 1920:

For Local Service:

Individual Line—Business	$22.50 per annum
Individual Line—Residence	$21.75 per annum
2 Party Line—Business	$20.75 per annum
2 Party Line—Residence	$20.00 per annum
4 Party Line—Business	$20.75 per annum
4 Party Line—Residence	$18.75 per annum

For Rural Party Line Service:

Business	$20.75 per annum
Residence	$18.75 per annum

The above charges to be subject to a discount of 20 per cent. for payment within 30 days from the date of rendering the account for same.

Charges for Individual and 2 Party Lines apply within a radius of one-half mile from the Central Office; for 4 Party Lines within a radius of one mile from the Central Office.

And the Board makes no order for costs, save and except that the Applicant shall pay $10.00 for the law stamps required for this Order.

(Sgd.) D. M. McINTYRE,
Chairman.

(Seal).

PROCEDURE FILE 5915.

Application by the Commissioners for the Telephone System of the Municipality of Wellesley, under section 88 of "The Ontario Telephone Act, 1918," for authority to increase (annual) charges for telephone service.

May 10th. Application filed.

June 8th. Hearing, pursuant to Appointment, 10 to 10.30 a.m., Court House, Kitchener. Applicants directed to furnish further particulars as to number of persons signing Petition.

Dec. 9th. Order.

December 9th, 1920.

ORDER.

Upon the Application of the above named Applicants, upon reading the Report of J. A. Ellis, Esquire, Commissioner, who heard the evidence adduced on behalf of all parties, Statements of Assets and Liabilities, Receipts and Disbursements, and other material filed,

The Board orders that the Applicants, the Commissioners for the telephone system of the Municipality of Wellesley, be authorized to charge the following rates for telephone service:

To Subscribers:	
For Principal and Interest	$11.35 per annum
For Maintenance	6.65 per annum
	$18.00 per annum
To Persons not being subscribers within the meaning of sub-section (g) of Section 2 of "The Ontario Telephone Act, 1918"	$18.00 per annum

And the Board makes no order for costs, save and except that the Applicants shall pay $10.00 for the law stamps required for this Order.

(Sgd.) D. M. McINTYRE,
Chairman.

(Seal).

PROCEDURE FILE 5923.

Application by P. J. Lally, Bernard McGinnis and Joseph Heffernan, under section 7 of "The Ontario Telephone Act, 1918," for removal of their names from Petition for establishment of Tyendinaga Municipal Telephone System.

May 18th. Applications filed.

June 29th. Hearing, pursuant to Appointment, 10 a.m., Public Hall, Lonsdale. Applications of P. J. Lally and Bernard McGinnis dismissed. Judgment reserved re Joseph Heffernan pending search of title as to ownership of land at time of signing of Petition.

July 22nd. Order.

July 22nd, 1920.

ORDER.

Upon the Application of the above named Applicants, upon reading the Report of Donald M. McIntyre, Esquire, K.C., who heard the evidence adduced on behalf of all parties, the partial abstract of title in respect of the south half of Lot No. 20 in the Second Concession of the Township of Tyendinaga, and other material on file,

The Board orders that the application of the Applicant, Joseph Heffernan, for the removal of his signature from the petition presented to the Municipal Council of the Township of Tyendinaga praying for the establishment of a telephone system under the provisions of Part II of "The Ontario Telephone Act, 1918," be and the same is hereby granted and directs that the signature of the said Joseph Heffernan be forthwith removed from the said petition.

And the Board further orders that the applications of the Applicants, P. J. Lally and Bernard McGinnis, be and the same are hereby dismissed.

And the Board makes no order for costs or for law stamp fees in respect of this Order.

(Sgd.) D. M. McINTYRE,
Chairman.

(Seal).

PROCEDURE FILE 5929.

Application by the Commissioners for the Telephone System of the Municipality of Brooke, under section 88 of "The Ontario Telephone Act, 1918," for authority to increase charges for service.

May 20th. Application filed.

Oct. 27th. Hearing, pursuant to Appointment, 10 a.m., Cope's Hall Allinston.

Dec. 8th. Order.

December 8th, 1920.

ORDER.

Upon the Application of the above named Applicants, and upon reading the report of A. B. Ingram, Esquire, Vice-Chairman, who heard the evidence adduced on behalf of all parties, Statements of Assets and Liabilities, Receipts and Disbursements, and other material filed,

The Board orders that the Applicants, the Commissioners for the telephone system of the Municipality of Brooke, be authorized to charge the following rates for telephone service:

To Subscribers:

For Principal and Interest	$7.35 per annum
For Maintenance	7.65 per annum
	$15.00 per annum

To Persons not being subscribers within the meaning of subsection (g) of section 2 of "The Ontario Telephone Act, 1918":

For Individual Line Local Service	$20.00 per annum
For 2 Party Line Local Service	17.50 per annum
For Rural Party Line Service	15.00 per annum

And the Board makes no order for costs, save and except that the Applicants shall pay $10.00 for the law stamps required for this Order.

(Sgd.) D. M. McIntyre,
Chairman.

(Seal).

Procedure File 5935.

Application by The Lennox Telephone Company, Limited, under section 88 of "The Ontario Telephone Act, 1918," for authority to increase charges for service.

May 26th. Application filed.

July 30th. Hearing, pursuant to Appointment, 10 to 11 a.m., Council Chamber, Napanee.

Aug. 26th. Order.

August 26th, 1920.

Order.

Upon the Application of the above named Applicant, and upon reading the Report of Donald M. McIntyre, Esquire, K.C., Chairman, who heard the evidence adduced on behalf of all parties, Statements of Assets and Liabilities, Receipts and Disbursements, and other material filed,

The Board orders, subject to the several conditions prescribed in this Order, that leave be granted to the Applicant to charge the undermentioned tariff charge for telephone service, to take effect as from July 1st, 1920:

For Rural Party Line Service	$22.50 per annum.

And the Board further orders:

1. That the said tariff charge be subject to a discount of 20 per cent. on all amount paid within thirty days of the date of rendering the account for same.

2. That for the purpose of providing a fund to meet the cost of the renewal of its plant and equipment, the Applicant shall on December 31st, 1921, and each year thereafter set aside out of its earnings a sum equal to not less than five per cent. of the total value of the plant and equipment used in the Applicant's business on December 31st in each such year. The fund so provided shall, unless otherwise authorized by the Board, be applied exclusively to the cost of renewing such portion of the said plant and equipment as may from time to time be rendered necessary by depreciation or obsolescence, and after deducting therefrom such amounts as may have been so expended in any one year the residual amount shall be deposited in a chartered bank at interest and the money so deposited may, with the approval of the Board, be expended in new construction or extensions or additions to the property of the Company, or with the like approval, may be invested in interest-bearing securities; and all interest accruing from any portion of the depreciation fund so deposited or invested, and such portion of the earnings fixed by the Board as attributable to the moneys so expended in new construction, extensions or additions shall from time to time be carried to the credit of the said fund.

3. That the Applicant shall on or before the fifteenth day of January in each year, furnish the Board with a report setting forth: (a) the total amount standing at the credit of the fund referred to in Clause 2 hereof on the 31st day of December in the preceding year; (b) the amount of such fund which has been temporarily used in the purchase of securities; (c) the names and values of the securities so purchased, together with (d) a certified statement from the bank in which the fund is deposited, showing the amount standing at the credit of such fund on the last named date.

4. That the Applicant shall keep separate records of all expenditures upon the construction, operation, maintenance and renewal of its plant and equipment and shall each year furnish its shareholders with an annual report and balance sheet in the form approved of by this Board as set forth on pages 141 to 144 of "Telephone Systems, 1919."

And the Board makes no order for costs, save and except that the Applicant shall pay $10.00 for the law stamps required for this Order.

(Sgd.) D. M. McIntyre,
Chairman.

(Seal).

Procedure File 5947.

In the Matter of the Petition of M. T. Whelan, and others, under section 9 of "The Local Improvement Act," against the proposed resurfacing of pavement on McLaren Street, between Percy Street and Bronson Avenue, in the City of Ottawa.

June 1st. Petition filed.

June 5th. Certificate of City Clerk of Ottawa (that Petition sufficiently signed and filed in time) filed.

June 18th. Hearing, pursuant to Appointment, 10 to 10.30 a.m., Council Chamber, City Hall, Ottawa. Report for Local Improvement withdrawn by City.

Procedure File 5957.

Application by The Capreol Townsite, Limited, Owner, under "The Planning and Developement Act," for approval of plan of part Lot 10, Concession VI, Township of Capreol, District of Sudbury.

June 5th. Application, etc., filed.

June 22nd. Hearing, pursuant to Appointment, 11 to 11.40 a.m., at Board's Chambers. Plan to be amended so that Mooney Street shall be laid out 66 feet wide. Plan will then be approved.

June 25th. Amended plan filed, considered, approved and certified.

July 2nd, 1920.

ORDER.

The Petition of J. D. McLean and others, under Section 9 of the Local Improvement Act, against the construction as a Local Improvement of the proposed re-surfacing with asphalt of Somerset Street, between Bank and O'Connor Streets in the said City of Ottawa, having come on to be heard before a special sittings of this Board, held at the City of Ottawa, on Friday the Second day of July, A.D. 1920, at the hour of 10.30 in the forenoon, in the presence of the said Petitioners and of the Assistant City Engineer, and the Solicitor for the City of Ottawa, upon hearing the evidence submitted by the Corporation in support of the said work and what was alleged as well on behalf of the said Petitioners, and the Board's Engineer having inspected the pavement which it is proposed to re-surface, and the matter having stood over for the decision of the Board until this date;

1. The Board doth hereby order and direct that the said petition should be, and the same is hereby, dismissed.

2. The Board doth further order and adjudge that its fee be fixed at the sum of $10.00 to be affixed in law stamps to this Order, and that the said amount may be added to the costs of the said Local Improvement work when proceeded with.

(Sgd.) D. M. McINTYRE,
Chairman.

(Seal).

PROCEDURE FILE 5992.

Application by The Byron Telephone Company, Limited, under section 88 of "The Ontario Telephone Act, 1918," for authority to increase charges for service.

June 21st. Application filed.

Oct. 28th. Hearing, pursuant to Appointment, 2 p.m., Court House London. Adjourned pending Report from Chartered Accountant.

Dec. 6th. Application withdrawn.

PROCEDURE FILE 5994.

Application by The Walkerville Realty, Limited, and Walker Sons, Limited, under "The Planning and Development Act," for approval of plan of parts Lots 92, 93, 94 and 95, McNiff's Survey, Concession II, Township Sandwich East, Co. Essex.

June 24th. Application, etc., filed.

June 24th. Hearing, 3 to 4.30 p.m. Adjourned "sine die" pending proceedings by Applicants under section 13, Chap. 120, Ontario Statutes, 1920.

July 13th. Plan referred to Board for approval, in accordance with section 30 (4) (c) of "The Essex Border Utilities Act," City of Windsor having objected thereto.

July 20th. Hearing, 10.30 to 11 a.m. Plan approved and certified.

PROCEDURE FILE 5961.

Between:

D. S. Austin (trading as "The Murray-Brighton Telephone System"),

Applicant,

—and—

The Township of Brighton (Commissioners for Telephon System of),

Respondents.

For an Order revising the terms and conditions for interchange of service between Wooler and Orland, under section 83 of "The Ontario Telephone Act, 1918").

June 7th. Application filed.

June 28th. Hearing, pursuant to Appointment, 3.30 to 4 p. m., Town Hall, Trenton. Agreement to be filed for approval.

Aug. 16th. Agreement filed.

Oct. 5th. Order.

October 5th, 1920.

ORDER.

Upon the Application of the Commissioners for the Telephone System of the Municipality of the Township of Brighton and David Stanley Austin and Allen Guy Austin (trading as The Murray-Brighton Telephone Company), and upon reading Memorandum of Agreement made the First day of August, A.D. 1920, by and between The Commissioners for the Telephone System of the Municipality of the Township of Brighton and David Stanley Austin and Allen Guy Austin (trading as The Murray-Brighton Telephone Company), duplicate of which Agreement has been filed in the office of the Board.

The Board orders that the said Agreement be and the same is hereby approved, under and in pursuance of Section 82 of "The Ontario Telephone Act, 1918," provided that the Board may at any time hereafter, of its own motion, or upon any application or complaint, rescind this Order and withdraw its approval of the above mentioned Agreement, and require the same to be altered, amended, varied or otherwise changed or modified, as to the said Board may seem requisite or proper.

The Board makes no order for costs, save and except that the Applicants shall each pay the sum of $1.00 for the law stamps required for this Order.

(Sgd.) D. M. McINTYRE,
Chairman.

(Seal).

PROCEDURE FILE 5963

In the Matter of the Petition of J. D. McLean, et al, under section 9 of "The Local Improvement Act," against the proposed construction of an asphalt pavement on Somerset Street between Bank and O'Connor Streets, in the City of Ottawa.

June 8th. Petition filed.

June 9th. Further Petition filed.

July 2nd. Hearing, pursuant to Appointment, 10 to 10.45 a.m., Council Chamber, Ottawa. Judgment reserved for one month from 2nd July, 1920.

Aug. 10th. Engineer's Report filed.

Aug. 10th. Report of Mr. Commissioner Ellis filed.

Aug. 19th. Order, dated July 2nd, 1920, issued.

The Chairman, The Ontario Railway and Municipal Board, Toronto.

Sir:

Re Somerset Street, Ottawa

While in Ottawa yesterday I examined the condition of the surface of Somerset Street from Bank to O'Connor Street, in company with Mr. Ellis, of your Board.

This street is 30 feet wide between curbs, and 610 feet between the intersections with O'Connor and Bank Streets. The surface was laid in 1905 and, according to the information obtained from the City authorities it is composed of 1" thickness of stone chippings, 3" of tarred stone. and 2" of stone spalls. It is, therefore quite different in construction to that of Clarence Street. The surface all along is full of holes and has been patched up with asphalt in some places and concrete in others until the original surface has been worn out all round.

In my opinion this street will have to be entirely relaid and any further attempts to repair will only be useless. This would not appear to have any concrete base

Yours truly,

(Sgd.) H. W. Middlemist.

Report.

The Petitioners were heard on the 2nd July, 1920. They urged that the portion of Somerset Street in question did not require resurfacing at present, and that all that was needed was a very small amount of repair, In company with the Board's Engineer I have examined the condition of the street in question. The street is 30 feet wide, between curbs, and 610 feet between the intersection with O'Connor Street and Bank Street. The surface of tar macadam was laid in 1905, and according to the information obtained from the City authorities it is composed of 1" thickness of stone chippings, 3" of tarred stone and 2" of stone spalls.

The Board's Engineer reports as follows: "The surface all along is full of holes and has been patched up with asphalt in some places and concrete in others until the original surface has been worn out all round. In my opinion this street will have to be entirely relaid and any further attempts to repair will only be useless."

I concur in this report and therefore recommend that the Petition be dismissed.

(Sgd.) J. A. Ellis,
Commissioner.

Toronto, August 10th, 1920.

PROCEDURE FILE 5995

Application by Walkerville Realty, Limited, and Walker Sons, Limited, under "The Planning and Development Act," for approval of plan of parts Lots 95 and 96, Concession II, Township Sandwich East, Co. Essex.

June 24th. Application filed.

June 24th. Hearing, 3 to 4.30 p.m. Adjourned "sine die" pending proceedings by Applicants under section 13, Chap. 120, Ontario Statutes, 1920.

July 13th. Plan referred to Board for approval according to section 30 (4) (c) of "The Essex Border Utilities Act," City of Windsor having objected thereto.

July 20th. Hearing, 10.30 to 11.30 a.m. Plan approved and certified.

PROCEDURE FILE 6002
(See P.F. 6004)

In the Matter of "The Ontario Railway and Municipal Board Act," and in the matter of The Toronto Railway Company's Employees' Strike.

Application by The Toronto Railway Company to the Board under section 61 of the above Act. (C. 186, R.S.O., 1914).

June 25th. 12 a.m. to 4.10 p.m. Conference with Company and its Employees, pursuant to Special Appointment. Board suggests that proposition of advance of 5c. per hour be submitted by Jos. Gibbons, et al, to the men. Messrs. Gibbons, et al, will submit this to men at a meeting to-morrow.

June 26th. Proposition accepted by striking employees.

June 27th. Operation of cars resumed.

July 15th. Hearing, pursuant to arrangement, 10 to 11.30 a.m. Board directs that increase pay date back to expiry of old Agreement, viz., 16th June, 1920 (excluding period of strike). Trackmen's new scale to relate back only to conclusion of strike.

PROCEDURE FILE 6004
(See P.F. 6002)

Application by The Toronto Trades & Labour Council, under section 260 of "The Ontario Railway Act," for operation by the Board of The Toronto Railway Company's cars owing to their failure to operate in accordance with their statutory obligation—such failure being due to Employees' strike.

June 25th. Hearing, by Special Appointment, 10.45 to 11.20 a.m. Board will enforce operation as applied for, if necessary. (See Reporter's Notes).

PROCEDURE FILE 6014

Application by The Palace Road Telephone Company, Limited, under section 88 of "The Ontario Telephone Act, 1918," for authority to increase charges for service.

June 28th. Application filed.

July 30th. Hearing, pursuant to Appointment, 11 to 11.30 a.m., Council Chamber, Napanee. Rate of $18.75 per annum, less 20% for payment in 30 days, recommended.

Sept. 1st. Order.

September 1st, 1920.

ORDER.

Upon the Application of the above named Applicant, and upon reading the Report of Donald McIntyre, Esquire, K.C., Chairman, who heard the evidence adduced on behalf of all parties, Statements of Assets and Liabilities, Receipts and Disbursements, and other material on file,

The Board orders that the Applicant, "The Palace Road Telephone Company, Limited," be authorized to make the following charge for telephone service, to take effect as from July 1st, 1920:

For Rural Party Line Service.........$18.75 per annum

The aforesaid charge to be subject to a discount of 20 per cent. on all amounts paid within thirty days from the date of rendering the account for same.

And the Board makes no order for costs, save and except that the Applicant shall pay $10.00 for the law stamps required for this Order.

(Sgd.) D. M. McINTYRE,
Chairman.

(Seal).

PROCEDURE FILE 6027.

Application by the City of Hamilton, under section 44 of "The Municipal Act," for redivision of the said City into 8 Wards.

July 7th. Application and material filed.

Sept. 22nd. Hearing, pursuant to Appointment, 11 to 11.30 a.m., Council Chamber, City Hall, Hamilton. Application granted. Hamilton City Solicitor to draft Order. Order to take effect 1st February, 1920.

Dec. 17th. Order issued.

September 22nd, 1920.

ORDER.

Upon the Application of the Council of the Corporation of the City of Hamilton made on the 30th day of June, 1920, it has been made to appear that two-thirds of all the members of the Municipal Council of the Corporation of the City of Hamilton, in the County of Wentworth, did, in Council before the 15th day of July, 1920, and in pursuance of section 44 of "The Municipal Act," pass a Resolution affirming the expedience of a division or new division into Wards being made of the said City, and upon hearing what was alleged by Counsel on behalf of the said Applicants;

1. This Board doth order and proclaim the redivision of the said City of Hamilton into eight Wards to be called and known respectively as Ward No. One, Ward No. Two, Ward No. Three, Ward No. Four, Ward No. Five, Ward No. Six, Ward No. Seven, and Ward No. Eight.

2. It is further ordered that the said Wards shall be bounded as follows, that is to say:

WARD NO. 1

Commencing at the intersection of King and Wentworth Streets. Thence easterly along King Street to its intersection with Main Street, thence easterly along Main Street to the dividing line between the townships of Barton and Saltfleet. Thence southerly along said dividing line between Barton and Saltfleet townships, 100 ft. to a point. Thence westerly along a line 100 ft. south of the southerly limits of Main Street where part of the township lots are unsubdivided and along the southerly limits of lots fronting on Main Street where subdivisions occur, to a point 150 ft. east of Ottawa Street. Thence southerly along a line of 150 ft. easterly of and parallel with the east limit of Ottawa Street to the brow of the mountain. Thence westerly following the brow of the mountain to the west limit of Sherman Avenue. Thence southerly along the west limit of Sherman Avenue to the north limit of the road allowance between the third and fourth concessions of the township of Barton now known as Concession Street. Thence westerly along the north limit of the said Concession Street to the east limit of Lakeview Avenue. Thence southerly on the line of the east limit of Lakeview Avenue produced the south limit of Concession Street. Thence westerly along the south limit of Concession Street to Wentworth Street. Thence northerly along Wentworth Street to the place of beginning.

WARD NO. 2

Commencing at the intersection of King and Wentworth Streets. Thence westerly along King Street passing the north side of Gore Park to Bay Street. Thence southerly along Bay Street and the continuation of the west limit thereof to the mountain brow. Thence easterly along the said mountain brow to the intersection of such brow with the south limit of the allowance for road between the third and fourth concessions of the Township of Barton, now known as Concession Street. Thence along the south limit of said allowance for road now known as Concession Street to Wentworth Street. Thence northerly along Wentworth Street to the place of beginning.

WARD NO. 3

Commencing at the intersection of Bay and King Streets. Thence westerly along King Street and the Dundas Road to the west limit of the allowance for road between lots Nos. 20 and 21 of the Township of Barton, called Paradise Road. Thence southerly along the west limit of the said road allowance between lots Nos. 20 and 21 to the south limit of the allowance for road between the third and fourth concessions of the Township of Barton. Thence easterly along said south limit of the allowance for road between the third and fourth concessions to the division line between lots Nos. 19 and 20 of the Township of Barton. Thence southerly along said division line to the brow of the mountain. Thence southerly along the brow of the mountain to a point where such brow would intersect the north limit of the allowance for road between the fourth and fifth concessions of the Township of Barton. Thence easterly along the north limit of the said road allowance to a point where such north limit would again intersect the brow of the mountain. Thence northerly and easterly along the brow of the mountain to a point where the west limit of Bay Street (produced southerly) would intersect the said brow. Thence northerly along the said west limit of Bay Street (produced southerly) and continuing along Bay Street to the place of beginning.

WARD NO. 4

Commencing at the intersection of King and Bay Streets, thence westerly along King Street and the Dundas Road to the easterly limit of the Right of Way lands of the Hamilton and Dundas Railway. Thence north-westerly along the easterly limit of the said Right of Way lands and the said easterly limits produced to the boundary line between the Townships of Ancaster and West Flamboro. Thence north-easterly following the said line between the Townships of Ancaster and West Flamboro to the township line between the Townships of Barton and West Flamboro. Thence northerly along the township line between the Townships of Barton and West Flamboro to the Desjardins Canal. Thence easterly along the Desjardins Canal (the same being the dividing line between the Townships of West Flamboro and Barton) to the shore line of the Marsh, known as Coote's Paradise, thence along the westerly and northerly shore line of said Marsh and the old channel of the original Dundas Canal, passing the Valley Inn to the waters of Burlington Bay. Thence along the southerly margin of Burlington Bay to Rush Street. Thence easterly along Rush Street to Bay Street, thence southerly along Bay Street to the place of beginning.

WARD NO. 5

Commencing at the intersection of King and Bay Streets, thence northerly along Bay Street to Rush Street. Thence westerly along Rush Street to the Waters of Burlington Bay. Thence easterly along the southerly margin of Burlington Bay to a point where the centre line of Mary Street (produced northerly) would intersect the waters of Burlington Bay. Thence southerly along the production northerly of the centre line of Mary Street and continuing southerly along Mary Street to King Street. Thence westerly along King Street to the place of beginning.

WARD NO. 6

Commencing at the intersection of King and Mary Streets, thence northerly along Mary Street and the centre line of Mary Street (produced northerly) to the waters of Burlington Bay. Thence easterly along the southerly margin of Burlington Bay to Wentworth Street. Thence southerly along Wentworth Street to King Street. Thence westerly along King Street to the place of beginning.

WARD NO. 7

Commencing at the intersection of King and Wentworth Streets, thence northerly along Wentworth Street to the waters of Burlington Bay. Thence easterly along the southerly margin of Burlington Bay to Gage Avenue. Thence southerly along Gage Avenue to King Street. Thence westerly along King Street to the place of beginning.

WARD NO. 8

Commencing at the intersection of King Street and Gage Avenue, thence easterly along King Street to the intersection of King and Main Streets, thence easterly along Main Street from such intersection to the dividing line between the Townships of Barton and Saltfleet. Thence northerly along the said dividing line between Barton and Saltfleet to the waters of Burlington Bay. Thence westerly along the southerly margin of the waters of Burlington Bay to Gage Avenue. Thence southerly along Gage Avenue to the place of beginning.

3. And we further direct that the said re-division of the said City of Hamilton into Wards as aforesaid, shall take effect in accordance with the provisions of said Municipal Act, on and from the First day of February, 1921.

4. And it is ordered that the Municipal Corporation of the City of Hamilton shall pay the sum of $15.00 for law stamps on this Order.

(Sgd.) D. M. McIntyre,
(Seal). Chairman.

Procedure File 6028.

In the Matter of the Petition of E. M. Lerner, et al, under section 9 of "The Local Improvement Act," against the construction of an asphalt pavement on Clarence Street, between Sussex Street and Parent Street, in the City of Ottawa, as a Local Improvement.

July 8th. Petition filed.

July 30th. Hearing, pursuant to Appointment, 10 to 10.30 a.m., Council Chamber, Ottawa. Adjourned "sine die."

Aug. 6th. Board notified City that the matter should stand for a year.

Aug. 10th. Engineer's Report filed.

August 7th, 1920.

The Chairman, The Ontario Railway & Municipal Board,
Toronto.

Sir:

Re Clarence Street, Ottawa.

According to instructions from your Board, I went to Ottawa on Thursday night and yesterday morning, accompanied by Mr. Ellis of your Board, I made an inspection of Clarence Street between Sussex and Parent Streets, a distance of 560 feet, and beg to report as follows:

I am informed by the City authorities that this portion of the above mentioned street was originally composed of a concrete base 6″ thick, on the top of which was a binder ½″ thick, and then 2″ thickness of asphalt. I found the surface worn away into holes, reaching to the concrete base in most cases and at very frequent intervals all along except near the junction with Sussex Street for a short distance. I measured the first thickness of the asphalt at these holes and found it to vary from ¾″ to 1¼″. The surface generally is cracked and uneven and my opinion is that it would be quite useless to attempt any further repairs, and the whole asphalt surface will have to be renewed. Some repairs have been done and it was at such places where the asphalt was about 1¼″ thick.

This pavement was laid in 1906, and was then of the dimensions given above. The width of street from curb to curb is about 47 feet. At one spot the base has been broken away, due, I think, to a sewer underneath, and I noticed that as far as I could see under the earth has shrunk from the concrete base, leaving it without support. The City authorities have promised to attend to this.

Yours truly,

(Sgd.) H. W. Middlemist.

PROCEDURE FILE 6042.

Between:

The Corporation of the County of Frontenac,
Applicant,

—and—

The Corporation of the Township of Kingston,
Respondent.

(Appeal to Board under section 12 (8) of Chap. 16, 1917, re apportionment of cost of Provincial Highway).

July 9th. Application filed and considered.
July 9th. Reply directed.
Dec. 1st. Reply filed.

Dec. 22nd. Hearing, pursuant to Appointment, 11 a.m. to 12.15 p.m.' to hear Application of Department of Highways of the Province of Ontario to be made Party Respondent. Order to issue making Department of Highways of the Province of Ontario a Party Respondent. Mr. Agar, Solicitor for Department of Highways, to draft Order and have it approved by Solicitors for Applicant and original Respondent.

PROCEDURE FILE 6043.

Between:

The Corporation of the County of Frontenac,
Applicant,

—and—

The Corporation of the Township of Pittsburg,
Respondent.

(Appeal to Board under section 12 (8) of Chap. 16, 1917, re apportionment of cost of Provincial Highway).

July 9th. Application filed and considered.
July 9th. Reply directed.
Dec. 1st. Reply filed.

Dec. 22nd. Hearing, pursuant to Appointment, 11 a.m. to 12.15 p.m., to hear Application of Department of Highways of the Province of Ontario to be made Party Respondent. Order to issue making Department of Highways of the Province of Ontario a Party Respondent. Mr. Agar, Solicitor for Department of Highways, to draft Order and have it approved by Solicitors for Applicant and original Respondent.

PROCEDURE FILE 6049.

In the Matter of the Petition of W. Harris & Company, Limited, under section 21 of "The Municipal Act," for annexation to the City of Toronto of parts Lots 4, 5 and 6, Reg. Plan No. 1163, Township of York.

July 13th. Original and copy of Petition and copy of Resolution of City Council filed.

July 29th. Hearing, pursuant to Appointment, 10.30 to 11.30 a.m., Board's Chambers. The tier of Lots on west side of Woodbine Ave. (according to registered plans) are by consent of all Parties, to be excluded from area to be annexed. Application granted to take effect Sept. 1st, 1920. Order settled. Mr. Fairty's draft approved (if and when amended to conform with Board's Order herein (See Reporter's Notes).

Aug. 8th. Order issued in form of draft filed.

July 29th, 1920.

ORDER.

Upon the application of the above named Applicants and upon hearing read the resolution of the Council of the Corporation of the City of Toronto passed on the Fifth day of July, 1920; the petition of said Applicants, and a copy of the plan of the lands proposed to be annexed being produced, and upon hearing read the affidavit of Gorville Mason Saunders as to service of notice of this Application upon the Clerk of the Township of York and the County of York; the affidavit of Joseph A. Black proving advertisement of the notice of hearing, and upon hearing what was alleged by Counsel on behalf of the Applicants the Corporation of the City of Toronto and the Corporation of the Township of York;

The Board orders and proclaims that the lands and premises in the Township and County of York included in the said petition, and being described as:

"All and singular that certain parcel or tract of land and premises situate lying and being in the Township of York, in the County of York and Province of Ontario, being composed of part of the lands included in a plan filed in the Registry Office for the County of York as No. 2170; said plan being a subdivision of part of Lot No. 6 according to a plan filed in the said Registry Office as No. 1163, and parts of Lots Nos. 4, 5 and 6 according to said plan No. 1163; which said parcel may be more particularly known and described as follows: Commencing at the north-easterly angle of the City of Toronto, as defined in an order of the Ontario Railway and Municipal Board, dated March 1st, 1914; thence southerly along the easterly limit of the City as defined in said order to the northerly limit of the said City as defined in an order of the said Board dated December 15th, 1909 thence easterly along last mentioned limit to the southerly production of the westerly limit of lot No. 30, according to said plan No. 2170; thence northerly following the westerly limits of lots Nos. 30 to 34, inclusive, lots Nos. 87 to 96 inclusive, and lots Nos. 135 and 136, crossing Strathmore Boulevard, Wolverleigh Boulevard, Glebeholme Boulevard and Milverton Boulevard to the northerly limit of the lands in said Plan No. 2170; thence westerly along the northerly limit of said plan No. 2170 and along the northerly limits of lots Nos. 6, 5 and 4 according to plan No. 1163 to the place of beginning;"

be and the same are hereby annexed to the City of Toronto. The said annexation to take place on the First day of September, 1920, subject to the following terms and conditions, namely:

(1) The said land shall be added to Ward Number Eight.

(2) That the taxes and rates imposed for the year 1920, or any prior year, upon any of the lands included in the territory annexed which shall not have been collected at the date of this order shall be collected by and subject to section 3 hereof, belong to the Township of York, and all right to collect the same (including distress for non-payment) or if necessary the sale of the said lands or any of them shall remain in the said Township as though this order had not been made.

(3) The said Township of York shall forthwith, after the collection of the same or after the date of this order, pay over to the City of Toronto one-third of the rates and taxes imposed upon any of the said lands for the year 1920.

(4). That a special assessment of the lands above described on which the taxes for 1921 shall be levied shall be made by the Corporation of the City of Toronto forthwith after this order becomes effective and thereafter the said lands may be assessed in the usual way as part of said City.

(5) Notwithstanding the provisions of the Local Improvement Act no part of the cost of any local improvement work to be hereinafter constructed within the area annexed shall be assumed or borne by the Corporation of the City of Toronto, but the entire cost thereof shall be assessed against the lands benefitted thereby and paid for by the owners from time to time of such lands.

(6) That save as aforesaid the Local Improvement Act shall apply to the execution of such works.

(7) That the entire cost of all other improvements within the said area shall be borne by the owners from time to time of the said lands and no part thereof shall be paid by the Corporation of the City of Toronto.

(Sgd.) A. B. INGRAM,
Vice-Chairman.

(Seal).

PROCEDURE FILE 6050.

Application by The Mallorytown Telephone Company, Limited, under section 88 of "The Ontario Telephone Act, 1918," for authority to increase charges for service.

July 13th. Application filed.

July 29th. Hearing, pursuant to Appointment, 10 a.m., Court House, Brockville.

Aug. 30th. Order.

August 30th, 1920.

ORDER.

Upon the Application of the above named Applicant, and upon reading the Report of Donald M. McIntyre, Esquire, K.C., who heard the evidence adduced on behalf of all parties, Statements of Assets and Liabilities, Receipts and Disbursements and other material filed,

The Board orders, subject to the several conditions prescribed in this Order, that leave be granted to the Applicant to charge the under-mentioned tariff charge for telephone service, to take effect as from July 1st, 1920:

For Rural Party Line Service: $17.50 per annum.

And the Board further orders:

1. That for the purpose of providing a fund to meet the cost of the renewal of its plant and equipment, the Applicant shall on December 31st, 1920, and each year thereafter set aside out of its earnings a sum equal to not less than five per cent. of the total value of the plant and equipment used in the Applicant's business on December 31st in each such year. The fund so provided shall, unless otherwise authorized by the Board, be applied

exclusively to the cost of renewing such portion of the said plant and equipment as may from time to time be rendered necessary by depreciation or obsolescence, and after deducting therefrom such amounts as may have been so expended in any one year the residual amount shall be deposited in a chartered bank at interest and the money so deposited may, with the approval of the Board, be expended in new construction, or extensions or additions to the property of the company, or with the like approval, may be invested in interest-bearing securities; and all interest accruing from any portion of the depreciation fund so deposited or invested, and such portion of the earnings fixed by the Board as attributable to the moneys so expended in new construction, extensions or additions, shall from time to time be carried to the credit of the said fund.

2. That the Applicant shall on or before the fifteenth day of January in each year furnish the Board with a report setting forth (a) the total amount standing at the credit of the fund referred to in Clause 1 hereof on the last day of December in the preceding year; (b) The amount of such fund which has been temporarily used in the purchase of securities; (c) The names and values of the securities so purchased, together with (d) a certified statement from the bank in which the fund is deposited, showing the amount standing at the credit of such fund on the last named date.

3. That the Applicant shall keep separate records of all expenditures upon the construction, operation, maintenance and renewal of its plant and equipment and shall each year furnish its shareholders with an anual report and balance sheet in the form approved of by this Board as set forth on pages 141 to 144 of "Telephone Systems, 1919."

And the Board makes no order for costs, save and except that the Applicant shall pay $10.00 for the law stamps required for this Order.

(Sgd.) D. M. McIntyre,
Chairman.

(Seal).

Procedure File 6055.

Application by the Town of Oshawa, under section 479 of "The Municipal Act" (as enacted by section 20, Chap. 33, Ontario Statutes, 1914), for approval of its By-law No. 1435 to extend Mary Street to the northerly limit of Aberdeen Street, at a width of 49 feet 6 inches.

July 15th. Application and material filed.

Aug. 9th. Hearing, pursuant to arrangement, 11 a.m. to 12 noon, at Board's Chambers. Plan amending former plan to be approved on further material being filed.

Oct. 25th. Further material filed.

Oct. 25th. Order.

October 25th, 1920.

Order.

Upon the Application of the said Corporation, upon consideration of the representations made to the Board at a Hearing held in this matter on the 9th day of August, 1920, and upon reading the copy of the said By-law and the other material filed,

The Board orders, under and in pursuance of the provisions of section 479 of "The Municipal Act," as re-enacted by section 20 of "The Municipal

Amendment Act, 1914," that the said By-law No. 1498, intituled "By-law number 1498 of the Corporation of the Town of Oshawa to extend Mary Street from the Northerly limit of Aberdeen Street to the Southerly limit of Mary Street, as marked on plan number 146," be and the same is hereby approved.

(Sgd.) D. M. McINTYRE,
(Seal). Chairman.

PROCEDURE FILE 6062.

Application by John A. Phin, Owner, under "The Planning and Development Act," for approval of plan of part Township Lot 10, Concession I, City of Toronto.

July 17th. Application filed.

July 26th. Hearing, pursuant to Appointment, 10.30 a.m., 11.10 to 11.30 a.m. Plan approved on compliance with City's condition (except as to execution of Agreement referred to in paragraph (c), Report No. I, Committee on Works filed herein).

Aug. 19th. Plan approved and certified.

PROCEDURE FILE 6063.

Application by The Robt. Davies Estate, Owner, under "The Planning and Development Act," for approval of plan of parts Lots 12 and 13, Concession II, Township York.

July 17th. Application filed.

July 26th. Hearing, 10.30 to 11.30 a.m. Applicants to lay out on plan highways in extension of Logan and Carlaw Avenues.

PROCEDURE FILE 6067.

Application by the City of Fort William, and The Public Utilities Commission of the City of Port Arthur, for an Order confirming a new schedule of passenger fares for The Port Arthur–Fort William Electric Railway, as authorized by By-law No. 1993 of the City of Fort William and By-law No. 4 of the Public Utilities Commission of the City of Port Arthur.

July 19th. Application and material filed.

Nov. 22nd. Order issued prohibiting charging of higher fares than those authorized by Board's Order of Jan. 6th. 1919. (See P.F. 5095).

Dec. 16th. Hearing, pursuant to Appointment, 11.30 a.m. to 12 noon, at Board's Chambers. At request of Applicants hearing adjourned to 4.30 p.m., Monday, December 20th, 1920.

Dec. 20th. Hearing, 4.10 to 5.10 p.m. Judgment reserved.

PROCEDURE FILE 6109A.

In the Matter of the Petition of the Robert Davies Estate, under section 21 of "The Municipal Act," for annexation to the City of Toronto of part of Township Lot 12, Concession II from the Bay, Township of York, and part of the Don Mills Road, all as described in the Resolution declaring the expediency of such annexation, passed by the Council of the Corporation of the City of Toronto on the 8th day of November, 1920.

Nov. 10th. Petition and Resolution of City Council filed.

Nov. 10th. Blue print plan, showing lands proposed to be annexed, filed.

Nov. 24th. Hearing, pursuant to Appointment, 11.30 a.m. to 12.10 p.m., at the Board's Chambers. Adjourned "sine die" pending reconsideration by City Council of terms re Local Improvements. Purchasers to be notified of next Hearing herein and of City's terms.

Dec. 24th. Amending Declaration by Toronto City Council, and list of purchasers, filed.

Dec. 29th. Hearing, pursuant to adjournment, 11 a.m. to 12 noon, at Board's Chambers. Annexation decreed. Order to take effect 2nd January, 1921, and be drafted by City Solicitor and approved by Solicitors for Davies Estate and Township and County of York. (Repairs to be borne by City).

PROCEDURE FILE 6110.

In the Matter of the Petition of Robt. Horricks, et al, under section 18 (1) of "The Municipal Act," for annexation to the Township of Plummer Additional of part of the unorganized Township of Lefroy.

July 31st. Petition filed.

Dec. 14th. Hearing, pursuant to Appointment, at Thessalon, 1.30 to 3 p.m. Judgment reserved.

PROCEDURE FILE 6146.

In the Matter of the Petition of (Mrs.) Ada McCagg, and others, under section 9 of "The Local Improvement Act," against the construction of a 5′ concrete sidewalk on the south side of Armstrong Street, between Merton and McCormick Streets, in the City of Ottawa.

Aug. 16th. Petition filed.

Sept. 3rd. Hearing, 10 to 10.30 a.m. Petition dismissed but work not to be proceeded with for a year.

Sept. 16th. Order issued in form of draft filed.

September 3rd, 1920.

ORDER.

The above Petition having come on for hearing at a special sittings of the Board, held at the Council Chamber, in the City of Ottawa, on Friday the 3rd day of September, 1920, before Mr. Commissioner Ellis, duly authorized as provided by Section 9 of "The Ontario Railway and Municipal Board Act," in the presence of certain of the said Petitioners and of the Solicitor and Assistant Engineer of the City of Ottawa, and the said Commissioner having reported upon the said matter to the Board:

It is ordered that the said Petition be, and the same is hereby dismissed without costs, upon the Corporation of the City of Ottawa undertaking not to proceed with the construction of the said Local Improvement sidewalk on or before the 3rd day of September, 1921.

2. The Corporation of the said City shall affix law stamps to the amount of Ten Dollars to this Order in payment of the fees of the Board upon the said hearing, and the same may be added by the said Corporation to the cost of the said work when proceeded with.

(Sgd.) D. M. McINTYRE,

(Seal). Chairman.

PROCEDURE FILE 6147.

Application by the Township of York, under Chap. 100, Ontario Statutes, 1916, as amended by Chap. 98, Ontario Statutes, 1917, for approval of its By-law No. 5126, for construction, etc., of a Trunk Main and Service Pipe on Kilbarry Road, Russell Hill Road, Coulson Avenue, Keele Street, Weston Road, Hillary Avenue, Kane Street, Ewart Avenue, Silverthorne Avenue, Rogers Road, Caledonia Avenue, Corby Avenue and Dufferin Street, in Section "A," and Bloor Street Diversion to Mossom Road as far as Wickstead Avenue in Section "B," of the said Township.

Aug. 17th. Application and material filed.

Aug. 30th. Hearing, 11 to 11.30 a.m. Application granted.

PROCEDURE FILE 6167.

In the Matter of the Petition of C. H. Cochrane & Company, Limited, et al, under section 9 of "The Local Improvement Act," against the construction of a pavement on Wellington Street, between Pooley's Bridge and the westerly limit of Government property, in the City of Ottawa.

Aug. 28th. Petition filed.

Sept. 24th. Hearing, pursuant to Appointment, 10 to 11.40 a.m., Council Chamber, City Hall, Ottawa. Adjourned to 11 a.m., September 30th, at Board's Chambers, for argument before full Board.

Sept. 30th. Hearing continued, 11 a.m. to 1.20 p.m. Argument concluded. Judgment reserved.

Nov. 3rd. Judgment delivered.

Nov. 10th. Order issued in form of approved draft filed.

Nov. 18th. Notice of Motion for leave to appeal filed.

OPINION OF THE BOARD.

This is a petition by certain interested property owners under Section 9 of "The Local Improvement Act," against the construction as a local improvement of a pavement on Wellington Street between Pooley's Bridge and the westerly limit of the Government property in the City of Ottawa.

It appears in evidence that the pavement on the portion of Wellington Street in question was in a dangerous condition, that accidents had occurred and claims for damages had been made against the City. It further appears that the period for which the debentures to meet the cost of the old pavement —being presumably the estimated lifetime of the work—had not expired and the Corporation was prohibited by the provisions of section 45 of the Act from undertaking the construction of a new pavement as a local improvement in lieu of the old one. In this position of affairs the Corporation procured the Legislature to pass an Act respecting the City of Ottawa, being Chapter 131 of the Statutes of 1920. Subsection (1) of Section 7 of this Act provides in effect amongst other things that the Council of the Corporation of the City of Ottawa may provide by By-law, to be passed under the provisions of, and with the authority conferred by, "The Local Improvement Act," for undertaking and completing and for assessing and levying the cost of the construction of an asphalt pavement on Wellington Street, etc., notwithstanding that the debentures heretofore issued to provide for the cost of the existing pavement have not as yet been retired. Subsection (2) of Section 7 provides that if the Council avails itself of the authority conferred by subsection (1) it shall annually retire as they mature the unretired debentures issued in respect of the ratepayers' share of the cost of the existing pavement. This Act was assented to on 4th June, 1920, but by force of Section 1 of the Statute Law Amendment Act, 1918, did not come into force and take effect until the sixtieth day thereafter, to wit, 3rd August.

There was put in, in evidence a report of the City Engineer to the Board of Control (undated) recommending the construction of an asphalt (resurfacing) pavement as a local improvement upon the above portion of Wellington Street. In this report the cost of the work was apportioned as follows:

Against the lands abutting in the work.......	$35,316.44
Against the Corporation.....................	18,709.51
	$54,025.95

On 17th June, 1920, the Board of Control adopted the City Engineer's report and recommended to the Municipal Council the construction of the work. This report of the Board of Control was not presented to the Municipal Council until 16th August, 1920, when it was adopted and on 19th August, 1920, notice, as required by Section 11 of "The Local Improvement Act," of the Council's intention to proceed with the work under section 9 of that Act was published on 24th August, 1920. A notice containing the particulars set out in Form No. 1 to "The Local Improvement Act" (Exhibit No 7) was mailed in a registered enclosure to each property owner affected on 24th August, 1920. No By-law determining and declaring the Council's intention under Section 9 of the Act was passed. In the meantime under the assumed authority of a letter from the Board of Control to the City Engineer, dated 10th June, 1920, the construction of the work of resurfacing the pavement on the above portion of Wellington Street was commenced on 24th June, 1920, and was completed on or about 15th September, 1920.

Upon these facts the Petitioners have applied by petition to the Board for relief under Section 9 of "The Local Improvement Act," alleging that they are dissatisfied with the local improvement work and with the manner in which it has been undertaken.

It seems to be a fatal defect in the Respondents' procedure that no by-law has been passed by the Municipal Council. Section 249 of "The Municipal Act" requires that "except where otherwise provided" (a Council's) "powers shall be exercised by by-law." The relevant acts in this case, instead of otherwise providing expressly declare that a by-law is necessary for the valid exercise of its powers by a Municipal Council. Thus Section 9 of "The Local Improvement Act" enacts that "where the Council determines and by by-law. . . declares that it is desirable that the construction of a pavement, etc., should be undertaken as a local improvement, etc." So Section 7 of the City of Ottawa Act, being Chapter 131 of the Statutes of 1920, authorizes the Council to provide by by-laws for undertaking etc., the work here in question amongst other works. One of the latest cases in which emphasis is laid on the obligation of a strict adherence by Municipal Councils to Statutory requisites is Fleming v. Town of Sandwich, 44 O.L.R., 514, decided by the Appellate Division of the Supreme Court. At page 521 of the Report Mr. Justice Riddell delivering the judgment of the Court says: "The by-law here attached and the Assessment under it purport to be made in pursuance of a Statute, and it is well established that in such a case the Statutory provisions must be strictly complied with in the sense that non-observance of any of them is fatal."

Another infirmity in the procedure of the Municipal Corporation is that the work was commenced on the 24th June, 1920, while the Notice of intention of the Corporation to undertake the work was not published as required by Section 11 of the Act until 19th August, 1920. Clearly this Section contemplates that publication of intention shall be an act precedent to the commencement of the work and indeed to the passing of the construction by-law. This conclusion is fortified by the provisions of section 9 of the Act which provide for an appeal to the Board to be taken within twenty-one days after the first publication of the Council's intention to undertake the work with an express prohibition upon the Council's proceeding with the work pending the determination of the appeal. It is obvious that the efficacy of a property owner's right of appeal might be seriously impaired if the Council may first commence and execute a work in whole or in part and then publish its intention to tax for the work under "The Local Improvement Act." By the time the owner's right of appeal is ripe the condition of the situs of the work, in this case a pavement, is changed, with these possible consequences to a complaining property owner that it would be too late to ask to have changed the character and composition of the new pavement or to support by a view by the Board and its Engineer an appellant's contention that the old pavement was still serviceable and the new work improvidently undertaken.

For these reasons the Board concludes that the proceedings of the Corporation are void and incapable of validation by the Board and that the petition should be allowed and the Municipal Corporation enjoined from assessing and levying the cost of the said work under the provisions of the Local Improvement Act.

If it should appear that notwithstanding the foregoing it is competent for the Municipal Corporation to proceed with the work as a local improvement, then in the judgment of the Board the proper order to be made under subsection (2) of section 9 of "The Local Improvement Act" should direct that during the currency of any of the outstanding unpaid debentures issued in respect of the former work, no higher special rate per foot frontage in respect of the proposed work should be imposed upon a lot assessed or assessable in respect of both the former work and the proposed work than the special rate imposed upon such lot in respect of the former work.

There will be no costs to either party, but the City of Ottawa will pay $20.00 in law stamps on the Order.

(Sgd.) D. M. McIntyre,
Chairman.

Toronto, October 30th, A.D, 1920.

October 30th, 1920.

ORDER.

The Petition of C. H. Cochrane & Company, Limited, and others, under section 9 of "The Local Improvement Act," against the construction of a street pavement on Wellington Street between Pooley's Bridge and the westerly limit of Government property in the City of Ottawa, having come on to be heard before Mr. Commissioner Ellis, acting under the authority of Section 9 of "The Ontario Railway and Municipal Board Act", at a special sittings held at the City of Ottawa on the 24th day of September, 1920, in the presence of counsel as well for the petitioners as for the Corporation of the City of Ottawa, and after evidence had been taken at the said sittings the said petition having come on for further hearing before this Board at a special sittings held at the City of Toronto on the 30th day of September, 1920, upon hearing read the said evidence and upon hearing what was alleged by Counsel as well for the petitioners as for the Corporation of the City of Ottawa, and the said petition having stood over for further consideration by the Board.

1. The Board declares that the proceedings of the Corporation of the City of Ottawa are void and incapable of validation by the Board.

2. The Board orders and declares that said petition be allowed and that the Corporation of the City of Ottawa be and it is hereby enjoined from assessing and levying the cost of the above-mentioned work under the provisions of "The Local Improvement Act."

3. And the Board does not think fit to make any order as to costs except that the said Corporation of the City of Ottawa do pay $20.00 in law stamps on this Order.

(Sgd.) D. M. McINTYRE,
(Seal). Chairman.

PROCEDURE FILE 6168.

In the Matter of the Petition of the Redemptionist Fathers, under section 9 of "The Local Improvement Act," against the proposed construction of a 5′ concrete sidewalk on the north side of Beech Street, between Bayswater and Breeze Hill, in the City of Ottawa.

Aug. 30th. Petition filed.

Sept. 24th. Hearing, pursuant to Appointment, 10 to 10.20 a.m., Council Chamber, City Hall, Ottawa. Local Improvement Report withdrawn by the City.

PROCEDURE FILE 6175.

In the Matter of the Petition of (Mrs.) I. L. Parker, and others, under section 9 of "The Local Improvement Act," against the proposed construction of a pavement and sidewalk on Somerset Street, between Bank and Bay Streets, Ottawa.

Sept. 8th. Petition filed.

Sept. 9th. Further Petition filed.

Oct. 1st. Hearing, pursuant to Appointment, 10 to 11.40 a.m., Council Chamber, City Hall, Ottawa. Judgment reserved for 2 or 3 weeks.

Oct. 29th. Report of Mr. Commissioner Ellis filed, and adopted as basis of Board's Order. Order to be drafted by City.

REPORT OF COMMISSIONER ELLIS.

The portion of Somerset Street included in the proposed local improvement work is sixty feet in width. The present width of the roadway is thirty-four feet five inches, and the width of the existing sidewalks on both sides of the street is four feet. There are two street car tracks on this street. It is proposed to widen the present roadway from thirty-four feet five inches to forty-one feet. This involves the removal of the existing sidewalks and their reconstruction. It is proposed to make the new sidewalks five feet in width, and this also involves a narrowing of the existing boulevards. Both the sidewalks and the pavement were laid in 1902–3. Special legislation was obtained at the last session of the Legislature to authorize the City, in the event of it now constructing the new sidewalks and an asphalt pavement, to construct these works under the provisions of the Local Improvement Act, and in that event to charge to the general fund the remaining unpaid portion of the property owners' share of the old works.

The evidence on behalf of the City is that the existing pavement is in a bad condition; that it has been repaired two or three times a year for some years past; that the stone blocks in the track allowance are in bad shape; that the concrete base is in poor condition in places, particularly near the car tracks, and that a new base is required under such tracks. It is also shown that, owing to the existence of the car tracks, the present roadway is too narrow and in a dangerous condition. This evidence is not entirely concurred in by the petitioners but it is not seriously disputed.

I have come to the conclusion that the proposed new pavement is necessary and that the proper order to be made under subsection (2) of section 9 of "The Local Improvement Act" is one directing the Municipal Council to proceed with the work under "The Local Improvement Act," with this reservation that in any year during the currency of any of the outstanding unpaid debentures issued in respect of the former work no higher special rate per foot frontage in respect of the proposed work shall be imposed upon any lot assessed or assessable in respect of both the former work and the proposed work than the special rate imposed upon such lot in respect of the former work in such year.

With the above reservation the petition should be dismissed.

(Sgd.) J. A. ELLIS,
Commissioner.

Adopted as the basis of the Board's Order.
(Sgd.) D. M. MCINTYRE,
Chairman.

Toronto, October 29th, 1920.

PROCEDURE FILE 6175B.

Re Petition against concrete sidewalk south side of Somerset Street, from Bank to Lyon Street.

Sept. 8th. Petition filed.

Oct. 1st. Hearing, pursuant to Appointment, 10 to 10.40 a.m., Council Chamber, Ottawa. Judgment reserved 2 or 3 weeks.

Oct. 29th. Report of Mr. Commissioner Ellis filed, and adopted as basis of Board's Order. Order to be drafted by City.

REPORT OF COMMISSIONER ELLIS.

The facts in connection with the proposed construction of this sidewalk are to some extent set out in my report in the matter of the Petition against the construction as a local improvement of an asphalt and woodblock pavement on Somerset Street from Bank Street to Bay Street in the City of Ottawa (P.F. 6175).

The evidence on behalf of the Petitioners is that the sidewalks are in good condition at present, and that their lifetime is at least ten or fifteen years more. This is not contradicted by the City, but rather confirmed. The Assistant City Engineer states that owing to the existence of the car tracks on the street in question the present roadway is too narrow and in a dangerous condition, but that if there were no car tracks the roadway would not require to be widened or the sidewalks removed. The only reason for the construction of new sidewalks is clearly because of the necessity of widening the roadway and removing the existing sidewalks.

It appears to me that the property owners should not be called upon to pay the entire cost, except street intersections, of the proposed new sidewalks. It is clear that there is a necessity for widening the roadway and removing the existing sidewalks, but I must hold that the City is responsible for the existing conditions. The City authorized the laying of the car tracks, and itself laid the present sidewalks where they now are, and if there is now danger because of their having been so laid, it appears to me that the City must take the responsibility.

The existing sidewalks are four feet in width; the proposed new ones are to be five feet in width. The debentures to be issued for the proposed walks are to run for ten years while the debentures issued in respect of the existing walks were for twenty years expiring in 1922.

In my opinion, in view of the foregoing facts, and especially having regard to the excellent condition of the present sidewalk and its probable life if undisturbed, the proper order to make under subsection (2) of section 9 of "The Local Improvement Act" is one directing the Council to proceed with the work as a local improvement with this reservation that the Municipal Corporation shall, in addition to the Corporation's portion of the cost of the work under said Act, assume and pay one-half of the cost of the work which under said Act would otherwise be borne and paid by the property owners assessed in respect of such work. Subject to the above the petition should be dismissed.

There are two sidewalks, one on the south side of Somerset Street from Bank Street to Lyon Street, and the other on the north side of Somerset Street from Bank Street to Bay Street. Unfortunately the petition against the sidewalk on the north side of Somerset Street is not sufficiently signed. If it had been I would have made the same recommendation as the one I now make with reference to the sidewalk on the south side of Somerset Street.

It does, however, appear to me that the property owners on both sides of the street should be treated alike, and I, therefore, suggest that the City should introduce a new local improvement report with respect to the sidewalk on the north side of the Street, apportioning the cost in the same way as I recommend it should be apportioned with regard to the sidewalk on the south side of the street.

(Sgd.) J. A. ELLIS,
Commissioner.

Adopted as the basis of the Board's Order.
(Sgd.) D. M. MCINTYRE,
Chairman.

Toronto, October 29th, 1920.

PROCEDURE FILE 6176.

In the Matter of the Petition of The Ottawa and New York Railway Company, et al, under section 9 of "The Local Improvement Act," against the proposed construction of a concrete sidewalk on the west side of King Edward Avenue, between Mann Avenue and Somerset Street, in the City of Ottawa.

Sept. 8th. Petition filed.

Sept. 27th. Hearing, pursuant to Appointment, 10 a.m., 10.20 to 10.30 a.m. Local Improvement Report withdrawn by City.

PROCEDURE FILE 6181.

Application by the Town of Sandwich, under section 21 of "The Municipal Act," and Chapter 138, Ontario Statutes, 1920, for the annexation thereto of part of the Township of Sandwich West.

Sept. 10th. Application, blue prints, and Surveyor's Description filed.

Oct. 21st. Hearing, pursuant to Appointment, 11 a.m. to 12.55 p.m. Annexation decreed—to take effect forthwith from issue of Order. Taxes for 1920 belong to the Township. Order to be prepared by Applicant's Solicitor and approved by the Township and County, or settled by Board.
Oct. 29th. Order issued in form of approved draft filed.

October 21st, 1920.

ORDER.

Upon the Petition of certain Municipal electors of the Township of Sandwich West, in the County of Essex, praying that all that part of Lot 68 in the first concession of the Township of Sandwich West consisting of a strip of land about Three hundred (300) feet in width adjoining the easterly boundary of the Town of Sandwich, and hereinafter more particularly described, be annexed to the Town of Sandwich and upon reading the affidavits and exhibits filed and upon hearing the evidence adduced at the hearing at the Town of Sandwich on the 21st day of October, 1920, and it appearing that the requirements of section 21 of the Municipal Act have been complied with so far as required by Chapter 138 of the Statutes of Ontario passed in the Tenth and Eleventh years of the Reign of His Majesty, King George V, and that notice of this hearing has been duly served and published and upon hearing Counsel for the Town of Sandwich, Township of Sandwich West, and the petitioners.

1. This Board doth order that all and singular that certain parcel or tract of land and premises lying and being in the Township of Sandwich West, in the County of Essex, in the Province of Ontario, being composed of a strip of land three hundred (300) feet in width adjoining the easterly limit of the Town of Sandwich and being part of Farm Lot 68, in the First Concession described as follows:

Commencing at the intersection of the limit between Farm Lots 67 and 68 and the northerly limit of the Tecumseh Road; thence easterly along said northerly limit two hundred and eighty (280) feet nine (9) inches to a post planted; thence northerly along the Easterly limit of the lands of the Windsor Security Company, Limited, to a point eleven (11) feet six (6) inches west of the south-west angle of the alley shown on the rear of Plan 369; thence northerly along the westerly limit of the alley shown on Plan 369, and the extension thereof in a straight line to a certain iron bar planted in the southerly limit of London Street; thence northerly in the same straight line to the water's edge of the Detroit river; thence westerly along the water's edge of the Detroit river to the limit between Farm Lot 67 and 68; thence southerly along the limit between Farm Lot 67 and 68 to the place of beginning, be and the same is hereby annexed to the Town of Sandwich.

2. This Board doth further order that all assets and liabilities as between the said lands annexed and the Township of Sandwich West and the County of Essex shall be adjusted by arbitration under the provisions of the Municipal Act applicable thereto, in case the parties are unable to agree on such adjustment, as of the 31st day of October, 1920.

3. This Board doth further order that this Order shall take effect from and after the 31st day of October, 1920.

(Sgd.) D. M. McINTYRE,
Chairman.

(Seal).

PROCEDURE FILE 6211.

In the Matter of the Petition of the Corporation of the City of Brantford, under section 44 of "The Municipal Act," for a redivision of the said City into five Wards.

Sept. 21st. Petition, Resolution of City Council and other material filed.

Sept. 29th. Hearing, pursuant to Appointment, 12.30 to 12.45 p.m. City Hall, Brantford. Application granted, to take effect 1st February, 1921. Applicant's Solicitor to draft Order.

Oct. 1st. Order.

September 29th, 1920.

ORDER.

Upon the Application of the Corporation of the City of Brantford, and upon hearing read the resolution adopted by the Council of said Corporation on the 28th day of June, 1920, by a vote of more than two-thirds of all the members of the Council, and upon hearing the evidence adduced, and it appearing that notice of this Application and of the appointment for the hearing of same was duly published in the Brantford Expositor, a newspaper published at the said City of Brantford and having a circulation throughout the said City of Brantford; and it further appearing that notice of this application and of the appointment for the hearing of same was duly posted conspicuously at the City Hall, the Court House and the Post Office in the said City of Brantford, and also in conspicuous places in each of the Wards herein referred to.

1. This Board doth order that Ward Number One of the Corporation of the City of Brantford be constituted as follows: All that part of the City of Brantford, described as follows: Commencing at the intersection of Colborne and Market Streets; thence along Colborne Street to Brant Avenue; along Brant Avenue, Paris Road, Ava Road and the present City limits to the Grand River; thence following the centre of the Grand River down stream and the outer boundaries of West Brantford to the easterly limit of the Grand

River; thence along the easterly limit of the Grand River up stream to the centre of the canal; thence easterly along the centre of the Canal to Market Street; thence northerly along Market Street to the place of beginning.

2. This Board doth further order that Ward Number Two of the Corporation of the City of Brantford be constituted as follows: All that part of the City described as follows: Commencing at the intersection of Queen and Colborne Streets; thence along Queen Street to West Street; along West Street to St. George Street; thence following the City boundary along St. George Street, St. Paul Avenue, the Lyons Tract, Abigail Avenue to the Paris Road; thence along the Paris Road, Brant Avenue and Colborne Street to the place of beginning.

3. This Board doth further order that Ward Number Three of the Corporation of the City of Brantford be constituted as follows: All that part of the City described as follows: Commencing at the intersection of Queen and Colborne Streets; thence along Queen Street to West Street to Henry Street and its continuation to Stanley Street, along Stanley Street to Nelson Street, along Nelson Street to Clarence Street, along Clarence Street to Colborne Street; along Colborne Street to the place of beginning.

4. This Board doth further order that Ward Number Four of the Corporation of the City of Brantford be constituted as follows: All that part of the City described as follows: Commencing at the intersection of Colborne Street and Market Street; thence along Colborne Street to Clarence Street; along Clarence Street to Nelson Street; along Nelson Street to Stanley Street; along Stanley Street to the Hamilton Road to the easterly limit of the Glebe Lot; along the limit of the Glebe Lot to the centre of the Canal; along the centre of the Canal to Market Street; along Market Street to the place of beginning.

5. This Board doth further order that Ward Number Five of the Corporation of the City of Brantford be constituted as follows: All that part of the City described as follows: All that part of the City lying south of the centre of the Canal and to the east of the Grand River.

6. This Board doth further order that this Order shall come into effect on the first day of February, A.D. 1921.

(Sgd.) D. M. McIntyre,
Chairman.

(Seal).

PROCEDURE FILE 6215.

Application by Errol R. Fleming, et al, under "The Planning and Development Act," for approval of plan of part of Gore Lot, Indian Reserve, in the Town of Sandwich, County of Essex.

Sept. 23rd. Application and material filed.

Oct. 7th. Hearing pursuant to Appointment, 11.30 a.m. to 12.20 p.m., at Board's Chambers. Plan of subdivision shewing lands between Indian Road and "Right of Way" ("Pajot" Lane), to be filed by Town of Sandwich. Written Argument to be filed by Applicant's Solicitor. Hearing adjourned to 21st inst., at 11 a.m., at Council Chamber, Sandwich.

Oct. 21st. Hearing continued, Council Chamber, Sandwich, 11 to 11.10 a.m. Settlement arranged and application withdrawn.

PROCEDURE FILE 6221.

In the Matter of the Petition of the Rev. Albert Lackey and Victoria Lackey, under section 9 of "The Local Improvement Act," against the construction of a proposed new pavement on Augusta Street, between Rideau and Wilbrod Streets, in the City of Ottawa.

Sept. 27th. Petition filed.

Sept. 28th. Further Petition, by Geo. Johnston, et al, filed.

REPORT OF COMMISSIONER ELLIS.

Augusta Street is not a through thoroughfare, as its southerly end terminates at Wilbrod Street; it is a purely residential street. The present roadway is a macadam one. The evidence given on behalf of the petitioners was that the present macadam roadway is in very good condition except that a little repair is needed at one crossing, and that there are a few small hollows here and there.

It was admitted by the City that the roadway is not in a bad condition, but that next year it will require a certain amount of repairs to put it in good shape.

The City's Representatives did not press that the Petition against the proposed work should be disallowed, in fact it was stated, on behalf of the City, that there was not "the slightest objection to the report being set aside."

Under these circumstances I recommend that the Appeal to the Board be allowed.

(Sgd.) J. A. ELLIS,
Commissioner.

I adopt the above report as the basis of the Board's Order.

(Sgd.) D. M. McINTYRE,
Chairman.

Toronto, October 22nd, 1920.

October 22nd, 1920.

ORDER.

The Petition of George Johnston and others under section 9 of "The Local Improvement Act," against the proposed construction of an asphalt pavement on Augusta Street, between Rideau Street and Wilbrod Street, in the City of Ottawa, having come on to be heard before Mr. Commissioner Ellis, acting under the authority of section 9 of "The Ontario Railway and Municipal Board Act," at a special sittings held at the City of Ottawa on the 15th day of October, 1920, in the presence of the Petitioners and of the City Engineer and the City Solicitor for the City of Ottawa, upon hearing the evidence taken at the said sittings and the said Commissioner having reported to the Board in writing, under date of the 22nd day of October, 1920;

1. The Board orders and directs that the said Petition be allowed, and that the Local Improvement Report of the said Corporation for the undertaking of the said work be, and the same is hereby set aside.

2. The Board directs that its fees for the said sittings, fixed at the sum of Ten dollars, be paid by the said Corporation in law stamps to be affixed to this Order.

(Sgd.) D. M. McINTYRE,
Chairman.

(Seal).

PROCEDURE FILE 6226.

Application by The Bethesda & Stouffville Telephone Company, Limited, under section 88 of "The Ontario Telephone Act, 1918," for authority to charge a toll of 5 cents per conversation for interchange of service between subscribers to the Applicant's System whose lines do not terminate upon the same Central switchboard.

Sept. 30th. Application filed.

Oct. 15th. Hearing. Judgment reserved.

PROCEDURE FILE 6227.

In the Matter of the Petition of J. H. Albert, and others, under section 9 of "The Local Improvement Act," against the opening up and extension of Maple Street to Champagne Avenue, in the City of Ottawa, and the assessment of their respective properties for cost thereof, as a Local Improvement.

Sept. 30th. Petition filed.

Oct. 15th. Hearing, pursuant to Appointment, 10 a.m.,Council Chamber, City Hall, Ottawa. Local Improvement Report withdrawn.

PROCEDURE FILE 6228.

Application by the Municipality of Chapple, under section 18 (1) of "The Municipal Act," for annexation thereto of the Township of Potts and the Township of Richardson.

Sept. 30th. Application and material filed.

Nov. 10th. Hearing, pursuant to Appointment, 2 to 2.30 p.m., Court House, Fort Frances. Applicant to file a proper plan and description, certified by an Ontario Land Surveyor, of the portions to be annexed. Judgment reserved.

Nov. 15th. Further material filed.

Nov. 16th. Order.

PROCEDURE FILE 6251.

In the Matter of the Petition of F. Gowland, and others, under section 21 of "The Municipal Act," for annexation to the Town of Weston of part of the Township of York.

Oct. 11th. Petition, etc., filed.

Nov. 16th. Two counter Petitions filed.

Nov. 22nd. Hearing, pursuant to Appointment, 11 to 11.35 a.m. Petition insufficient. Application dismissed. No costs. No Order to be issued. No fee to be charged for law stamp.

PROCEDURE FILE 6257.

In the Matter of the Application of the Corporation of the Village of Grimsby, under section 17 of "The Municipal Act," for annexation thereto of part of the Township of North Grimsby.

Oct. 13th. Application filed.

Nov. 18th. Hearing, pursuant to Appointment, 1.30 to 4 p.m., Council Chamber, Village of Grimsby. Application dismissed. No Order issued. No fee for law stamps to be charged.

PROCEDURE FILE 6270.

Application by the Commissioners for the Telephone System of the Township of Colborne, under section 78 of "The Ontario Telephone Act, 1918," for authority to erect poles and wires upon and along the same highways upon and along which the pole leads of The Goderich Rural Telephone Company, Limited, are already erected.

Oct. 19th. Application filed.

Oct. 19th. Application filed by The Goderich Rural Telephone Company, Limited, for an Order restraining the Township of Colborne from paralleling its pole leads.

Oct. 19th. Amended application filed.

Oct. 26th. Hearing. Judgment deferred 30 days to permit of parties reaching an agreement.

Nov. 26th. Further stay of 30 days granted.

PROCEDURE FILE 6275.

Between:

The London and Port Stanley Railway Company,
Appellants,
—and—
The Corporation of the Village of Port Stanley,
Respondent.

Assessment Appeal.

Oct. 20th. Notice of Appeal filed.

Nov. 3rd. Hearing, pursuant to Appointment, 11 a.m. to 2.30 p.m., at Court House, St. Thomas. Judgment reserved.

Nov. 15th. Judgment delivered.

November 16th, 1920.

ORDER.

Upon the Application of the Municipality of Chapple, and the Board having appointed Wednesday the 10th day of November, 1920, to hear such application at the Court House, Fort Frances, and notice of such hearing having been duly given as directed by the Board, upon hearing those appearing in support of the application,none appearing in opposition thereto, and upon consideration of the evidence adduced in support of the Application,

The Board doth order and proclaim that all and singular that certain parcel or tract of land and premises containing by admeasurement forty-seven thousand five hundred and sixty-six acres (47,566 acres) more or less, being composed of the Townships of Richardson and Potts, together with the north half of the Road Allowance of one chain between the Townships of Richardson and Tait, in the District of Rainy River, in the Province of Ontario, which said parcel is shown colored green on a plan certified by D. J. Gillen, O.L.S., dated 10th November, 1920, which said parcel may be more particularly known and described as follows:

Commencing at a point distant south fifty links (50) from the south-west angle of the Township of Richardson, said point being on the centre line of the road allowance between the Townships of Richardson and Tait;

Thence east along said centre line four hundred and one chains and fifty-five links (401.55) to a point distant north fifty links (50) from the north east angle of the said Township of Tait;

Thence south fifty links (50) to the north-west angle of the Township of Mather;

Thence east along the north boundary of the said Township of Mather five hundred and seventy-one chains and sixty-five links (571.65) to the south-east angle of the Township of Potts;

Thence north along the east boundary of said Township of Potts four hundred and eighty-nine chains and sixty-six links (489.66) to the north-east angle of said Township;

Thence west along the north boundaries of the Townships of Potts and Richardson nine hundred and seventy-one chains and ten links (971.10) to the north-west angle of said Township of Richardson;

Thence south along the west boundary of said Township and its production four hundred and eighty-nine chains and fifty links (489.50) more or less to the place of beginning, be and the same is hereby annexed to the Municipality of Chapple.

And this Board doth order and proclaim that such annexation shall come into force and take effect upon the first day of December, in the year of Our Lord, 1920.

And the Board further orders that the Applicant shall pay the sum of $15.00 for law stamps on this Order.

(Sgd.) D. M. McINTYRE,
Chairman.

(Seal).

Opinion of the Board.

This is an appeal by The London and Port Stanley Railway Company from a decision of the learned Judge of the County Court of the County of Elgin, affirming the assessment of the Appellant in respect of certain lands and buildings in the Village of Port Stanley for the year 1920. The subject matter of appeal may be divided into three groups. As the roll numbers of the several parcels are not given on the abstract of the Assessment Roll furnished the Board, the parcels may be designated:

Group 1—Comprising a number of small lots extending from north of Warren Street to south of Erie Street;

Group 2—Two cafeterias, one incline railway and one tea house;

Group 3—A block of land divided into three zones by lines roughly parallel to the lake shore, and extending of a width of 663 feet from the shores of Lake Erie to the north limit of the block.

As to the parcels in Group 1, the Company contends that under the circumstances to be afterwards detailed they are not assessable; as to the parcels in Group 2 the Appellants admit that by reason of the amendment to "The Assessment Act" made by 9 George V, Chap 50, Sec. 13, the cafeterias (2) and tea house are assessable, but under the designation "Restaurants," but deny that the parcel "Incline Railway" is assessable as such or under the designation of a switch back railway under the above amendment of 1919; and as to the parcels in Group 3 the Appellants contend first that they are not assessable, and second that if assessable the assessment is excessive as to valuation.

The Appellants are a railway company incorporated by Act of the Parliament of Canada, and own the properties whose assessment is in question here. By instrument dated 28th November, 1913, and confirmed by Act of Parliament, the Company leased to the City of London their line of railway and its appurtenances for the period of 99 years, to be computed from the 1st of January, 1914, so that the railway should be worked, and all receipts and earnings collected, by the City of London. The City of London is now in possession of the railway and its appurtenances—presumably including the property whose assessment is in question here—and is operating the undertaking through the instrumentality of the London Railway Commission.

Upon this statement of fact the Company says that in virtue of the provisions of Section 5, subsection 7 of "The Assessment Act," the several parcels in Groups 1 and 3 above mentioned are exempt from taxation. This subsection as amended in 1917 exempts from taxation:

"The property belonging to or leased by any County or Municipality or vested in or controlled by any public commission wherever situate, and whether occupied for the purposes thereof or unoccupied; but not when occupied by tenant or lessee."

On the other hand the Village of Port Stanley says, while no doubt originally exempt under subsection 7 of section 5 as amended, that exemption was taken away by 8 George V, Chapter 20, Section 39, which amended the Assessment Act by adding Section 45A. This section in effect declares that land owned by or vested in a municipal corporation or commission or in trustees or any other body acting for or on behalf of a municipal corporation and used . . . for the purposes of a railway, electric railway, street railway or tramway shall be liable to assessment and taxation for municipal and school purposes in the municipality in which it is situate at its actual value according to the average value of land in the locality.

There is no doubt that the property whose assessment is in question here is leased by the Company to the Municipality, the first section of 4 and 5 George V, c. 96 (Dom.), describes the above instrument of 28th November, 1913, though informal in some particulars, as "the lease and agreement."

Furthermore, it is clear that in view of this lease the parcels in Group 1 and 3 are exempt from taxation under the Amendment Act, as it stood after the amendment of 1917 unless section 45A as added in 1918 makes them taxable. Briefly the question raised is this; as a result of the above lease, are the lands in Groups 1 and 3 above—parcel of this lands demised—now "owned by" or "vested in" the municipal corporation?

The term "owner" is not defined in the interpretation section of "The Municipal Act," nor of "The Assessment Act"—though in section 25 of the latter Act it is defined for the purposes of that section. In Lester v. Lobley, 7 A. and B., 124, the Court of Queen's Bench was called on to interpret the terms "owner or proprietor," and it was held that the words have no definite legal meaning, and that as used in the Statute then under consideration, they included a tenant for a term of years. Notwithstanding this, in view of the contradistinction of the terms "owner" and "tenant" in the Assessment Act." (Section 2, par. 1; section 22, subsection 3; and section 37), the Board is of the opinion that the term "owner" does not include a tenant for years, and that The London and Port Stanley Railway Company alone is assessable as owner.

Are these lands "vested in" the municipal corporation so that it is assessable as tenant?

The leasehold interest of the City of London is an estate in these lands (Halsbury's Laws of England, vol. 24, par. 486). The interpretation of "land" in the Assessment Act does not purport to be exhaustive, By virtue of section 31 of "The Interpretation Act" it is permissible to read the meaning of "land" as interpreted in section 2, paragraph (f) of "The Municipal Act" into that word as used in "The Assessment Act." "Land" in "The Municipal Act" is interpreted to include amongst other things any estate or interest in lands and any right or easement affecting them. As a consequence of the above lease, an estate for years, terminating many years hence, is vested in the City of London. It follows that these lands, in the sense attributed to "land" by the interpretation section of "The Municipal Act," are vested in the municipal corporation, and are therefore assessable against the corporation as tenant. The letter of the law seems to warrant the foregoing conclusion. Looking to the spirit and intent of these enactments there seems no reason to impute to the Legislature an intention to tax lands where the fee simple is vested in a municipal corporation and exempt them from taxation where an estate for 99 years—it might be for 999 years—with the exclusive use, occupation and enjoyment, is vested in the same corporation.

The Board is of the opinion that the valuation of the parcels in Group 3 calls for revision. The parcels have been valued on a per foot frontage basis, and the data furnished the Board do not enable the Board to compute the areas of these parcels or of the adjoining parcels, whose assessed valuation may be looked to in determining the average value of land in the locality. Working with the material at hand the Board has reached the conclusion that the value, for assessment purposes, of the land extending from the Lake Front to the top of the hill is the mean between $33 and $15, the assessed values of the adjoining properties of the Amusement Company, that is $24.

This leaves to be considered the plateau lots, and here the only standard of value furnished the Board for comparison is the Amusement Company's western plateau property, which is assessed at $20 per foot frontage. The

Appellant's plateau property has an average depth of 300 feet as compared with a depth of 212 feet in the Amusement Company's property, or about two-fifths more. If two-fifths is added to the assessed value of the Amusement Company's plateau property, we have $23 which the Board finds to be a fair value per foot frontage of this parcel for assessment purposes. Adding $28 and $24 gives $52 ,the assessable value per foot frontage of the Appellent's property included in Group 3 above; the frontage of 663 feet multiplied by $52 gives $34,476, the full assessable value of the parcels in Group 3.

The findings of the Board are as follows: The assessment of the parcels in Group 1 is confirmed and the appeal in respect of them dismissed;

The assessment of the cafeterias and tea house in Group 2 is confirmed, but these parcels should be entered on the Roll as "Restaurants;" the assessment of the parcel Incline Railway is struck off, no evidence having been furnished that it falls under the designation switch back railway.

The assessment of the parcels in Group 3 is reduced to $34,476, and the parcels should be entered on the Roll as Lots Nos. 1, 2, 3, 4 and 5, which it appears is their designation on the registered plan of subdivision. The evidence is not clear that the Appellants are entitled to the whole of these lots, but if only a part that part should be sufficiently described on the Roll for purposes of identification.

The Municipal Corporation of the City of London should be entered on the Roll as Tenant, as well as The London and Port Stanley Railway Company as Owner.

There will be no costs to either party, but as success was divided each should pay $5.00 in law stamps, being one-half the Board's fee of $10.00 on the Order herein.

(Sgd.) D. M. McIntyre,
Chairman.

Dated at Toronto the 15th day of November, A.D. 1920.

Procedure File 6280.

Application by the Township of York, under section 5, chap. 100, Ontario Statutes, 1916, for approval of its By-law No. 5257, authorizing the construction, maintenance and operation of a System of Waterworks (Waterworks Section "C") in the Eastern part of said Township.

Oct. 23rd. Application and copy of proposed By-law filed.

Nov. 17th. Hearing, pursuant to Appointment, 11 to 11.30 a.m. By-law to be amended (before being finally passed) to contain enacting clause constituting Section "C." Application will then be granted if Board adopt Chairman's Report on Hearing herein. Applicant's Solicitor to draft Order.

Procedure File 6284.

In the Matter of the Petition of Judge L. A. Audette, and others, under section 9 of "The Local Improvement Act," against the proposed construction of a concrete sidewalk on the south side of Beserer Street, between the westerly end of the existing walk and Nelson Street, in the City of Ottawa.

Oct. 26th. Petition filed.

Nov. 12th. Hearing, pursuant to Appointment, 10 to 10.45 a.m., Council Chamber, City Hall, Ottawa. Adjourned "sine die" City Solicitor undertakes to bring in new Local Improvement Report charging larger proportion of cost to City (probably one-half).

PROCEDURE FILE 6292.

Between:

The Municipal Corporation of the Township of Walpole,
Applicant,
—and—

The Dominion Natural Gas Company, Limited,
Respondent.

(For gas supply at Franchise rate).

Nov. 2nd. Application filed.

Nov. 13th. Reply filed.

Dec. 6th. Hearing, pursuant to Appointment, 2.30 to 4.30 p.m., at Board's Chambers. Hearing adjourned "sine die" pending negotiations. (See Reporter's Notes).

PROCEDURE FILE 6294.

Application by E. T. Stephens, Limited, Owners, under "The Planning and Development Act," for approval of plan of subdivision of parts of Lots 11 and 12, Broken Front of Concession I, Southern Division, and 11 of said Concession I, in the Township of Etobicoke, County of York.

Nov. 2nd. Application and material filed.

Nov. 23rd. Hearing, pursuant to Appointment, 11 a.m. to 12.30 p.m., at Board's Chambers. Plan now in question to be amended as directed by Board and will then be approved. (See Reporter's Notes).

PROCEDURE FILE 6296.

Application by George Wright, under section 80 of "The Ontario Telephone Act, 1918," for an Order fixing the terms upon which the Commissioners for the Telephone System of the Municipality of Chapple shall furnish Applicant with telephone service.

Nov. 3rd. Application, etc., filed.

Nov. 10th. Hearing, pursuant to Appointment, 10 to 10.30 a.m., Court House, Fort Frances. Respondents agree to furnish service upon payment by Applicant of $100.00 in lieu of ten instalments of principal and interest, plus his share of the annual cost of maintenance.

PROCEDURE FILE 6310.

Application by The Shropshire Estates, Limited, Owners, under "The Planning and Development Act," for approval of plan of part Lot 8, Concession II, south of Dundas Street, Township of Toronto, County of Peel.

Nov. 5th. Application and material filed.

Nov. 23rd. Hearing, pursuant to Appointment, 11 a.m., 11.30 a.m. to 12 noon. Affidavit of service on Municipalities to be filed. Adjourned "sine die" pending application to Dominion Railway Commission to have Ogden Avenue made Highway Crossing over Grand Trunk Railway. If this is granted Hydro-Electric Commission will withdraw its opposition and this Board will approve a proper plan accordingly.

PROCEDURE FILE 6314.

In the Matter of the Application of The Essex Border Utilities Commission, under section 13 of Chap. 20, Ontario Statutes, 1920, and under section 4 of "The Planning and Development Act," for approval of its proposed plan showing the urban zone boundary of the Essex Border district.

Nov. 5th. Application and plan filed.

Nov. 24th. Hearing, pursuant to Appointment, 11 to 11.30 a.m., at Board's Chambers. Application granted. Plan approved.

PROCEDURE FILE 6320.

Application by The Welland County Telephone Company, Limited, under section 88 of "The Ontario Telephone Act, 1918," for authority to increase charges for telephone service.

Nov. 11th. Application and material filed.

Dec. 17th. Hearing. Adjourned "sine die."

PROCEDURE FILE 6323.

Between:

Jno. P. McLeod, Assessment Commissioner of the City of Hamilton,
and Frederick S. Lumsden, Assessor,

Appellants,

—and—

The Hamilton Jockey Club, Limited,

Respondent.

Assessment Appeal.

Nov. 13th. Notice of Appeal filed.

Nov. 30th. Hearing, pursuant to Appointment, 11 a.m., Council Chamber, City Hall, Hamilton. Judgment reserved.

Dec. 16th. Judgment delivered.

Dec. 21st. Order.

OPINION OF THE BOARD.

This is an Appeal by the City of Hamilton against a decision of the learned Judge of the County of Wentworth reducing the assessment of the race track and buildings, the property of The Hamilton Jockey Club, as fixed by the Assessment Commissioner, and confirmed by the Court of Revision. The several parcels of the property were assessed as follows:

Name	Actual value of land	Value of buildings	Total actual value of real property
Hamilton Jockey Club	$246,750	$39,000	$285,750
Superintendent's House	1,000	1,600	2,600
Hotel	2,500	24,400	26,900
	$250,250	$65,000	$315,250

Business Assessment amounting to $71,400, being at the rate of 25%, was imposed on the first item of $285,750. Upon appeal to the Court of Revision this assessment was confirmed, and upon a further appeal to the County Judge the assessment was reduced as follows: The total land assessment was reduced from $250,250 to $214,500, being at the rate of $3,000 per acre; and the assessment of the buildings was reduced from $65,000 to $50,000; with a direction to reduce the business assessment accordingly.

The land consists of a rectangular undivided block situate in the eastern portion of the City of Hamilton, and contains 71 acres. The land is used as a race track, the racing being restricted to a few days in the spring and autumn. Buildings suitable to its uses are erected on the lands such as grand stand, stables, paddock, jockeys' quarters, club house, pari mutuel buildings, superintendent's house, etc. There is also a large substantial building used as a hotel and the property is fenced.

On the hearing of the appeal no attempt was made to show that the property was saleable en bloc, to be used for racing purposes. Indeed the Appellant strove to support a higher assessment than that fixed by the County Judge on the hypothesis that the land was admirably adapted for subdivision into building lots, and the Appellant's case was directed to that end. The Appellant submitted a tentative plan of subdivision into building lots, and the Appellant's witnesses based their gross valuation of the land on the aggregate of the values of the lots on the plan. The Appellant also put in a plan showing the uncontested valuation of adjoining lots for assessment purposes. Section 69, subsection 16, of "The Assessment Act" upon an appeal of this kind, permits reference to be had to the value at which similar land in the vicinity is assessed. The Board adopts this as a standard of valuation, promising that lots at the corners of Barton and Ottawa Streets and of Barton and Kenilworth Streets, respectively, are the most valuable and in a falling scale the lots abutting on Barton Street midway between the above corners are next most valuable, and those on Ottawa Street next, and perhaps these on Kenilworth Street next, while the remaining lots to be carved out of the interior of the block, and at the north side, would be of a much lower value. Taking the mean of the rating per acre of the blocks on the south side of Barton Street and the west side of Ottawa Street, opposite the Respondent's property—$6,580, $5,237, $5,800 and $5,390—we get a mean rating per acre of $5,752. The mean of the rating per acre of the blocks opposite the Respondent's lands on the east and north—$3,540 and $3,426—is $3,493. Now the Board is of the opinion that the higher rating of $5,752, can in fairness be applied to only one-third of the entire block available for subdivision, and the ower rating of $3,483 to the remaining two-thirds.

Another consideration must be borne in mind, and that is that the comparison being made is with blocks of land that have been subdivided, and to make the comparison fair and equitable it is necessary that the Appellant's property should be treated as subdivided also. But in the process of subdivision the evidence shows that about one-third of the undivided block must be laid out and dedicated as streets. This leaves only 51 acres of land saleable as lots.

A further relevant consideration is the cost of making the subdivision and marketing the lots, which some witnesses put as high as 15% of the selling price, and some higher. But the Board does not press this.

Applying the above ratings the following appears:

$5,752 x 1/3 of 51 acres —	$97,784
$3,483 x 2/3 of 51 acres —	110,422
Land Assessment - —	$216,205

This works out to about $3,000 per acre for the land only—71 acres, as found by the learned County Judge. As such calculations can only be an approximation, in view of the above the Board adopts the finding of the County Judge, and confirms his valuation of the land for assessment purposes, namely, $214,500.

As to the buildings, the evidence is that the cost of their construction is much in excess of the sum at which they are valued for assessment purposes. The Appellant's witnesses placed the cost of the buildings at $128,248 and $136,769 respectively, with 25% off for depreciation. The valuation of the buildings only for the purposes of the Dominion Income War Tax is $226,191.17, but this includes pari mutuel equipment valued at $14,419.35. In 1918, the last year the Jockey Club's property was assessed in the Township of Barton, the buildings were valued for that purpose at $64,000. The Board is of the opinion that the lands of the Jockey Club are for their present uses, by reason of the buildings thereon, increased by an amount greater than $50,000, and the Board has reached the conclusion that no injustice is done by restoring the assessment of buildings to $65,000, the figure fixed by The Assessment Commissioner.

In the result the assessment will be as follows:

					Total
Roll No. 90640—	Land	$211,000;	Buildings	$39,000;	$250,000
Roll No. 90640A—	Land	1,000;	Buildings	1,600;	2,600
Roll No. 90641—	Land	2,500;	Buildings	24,400;	26,900
		$214,500		$65,000	$279,500

The business assessment will be computed on an assessment of $250,000.
There will be no costs, but as success was divided each party shall pay $5.00, the fee in law stamps upon the Order.

(Sgd.) D. M. McIntyre,
Chairman.

Dated at Toronto the 8th day of December, A.D. 1920.

December 16th, 1920.

ORDER.

Upon the Application of the above named Appellants by way of Appeal against a decision of the learned Judge of the County of Wentworth made and given on the 3rd day of November, 1920, reducing the assessment of the race track and buildings, the property of the Hamilton Jockey Club, as fixed by the Assessment Commissioner, and confirmed by the Court of Revision; upon hearing the evidence submitted at the hearing herein held by the Board at the City of Hamilton on the 30th day of November, 1920, and upon hearing what was alleged by Counsel for the Appellants and Respondents respectively.

1. This Board doth order and declare the assessment of the said The Hamilton Jockey Club, Limited, property, upon which taxes are to be paid during the year 1921 shall be as follows:

			Total
Roll No. 90640—	Land $211,000;	Buildings $39,000;	$250,000
Roll No. 90640A—	Land 1,000;	Buildings 1,600;	2,600
Roll No. 90641—	Land 2,500;	Buildings 24,400;	26,900
	$214,500	$65,000	$279,500

And the business assessment shall be computed on an assessment of $250,000.

2. And this Board doth further order that there shall be no costs but the Appellants and Respondents respectively shall each pay $5.00 in law stamps upon this Order.

(Sgd.) D. M. MCINTYRE,
Chairman.

(Seal).

PROCEDURE FILE 6330.

Application by The Essex Real Estate Company, Limited, under "The Planning and Development Act," for approval of plan of Block "F," Reg. Plan 747, in subdivision of part farm Lot 93 (McNiff's Survey), City of Windsor, County of Essex.

Nov. 19th. Application and material filed.

Dec. 2nd. Hearing, pursuant to Appointment, 2.30 to 3.15 p.m., at the Board's Chambers. Plan approved and certified.

PROCEDURE FILE 6342.

In the Matter of the Petition of Nelson King, et al, under section 18 (1) of "The Municipal Act," for annexation to the Township of Thessalon of the East part of the Township of Lefroy.

Nov. 23rd. Petition and plan, and description by Ontario Land Surveyor, filed.

Dec. 14th. Hearing, pursuant to Appointment, at Thessalon, 3 to 4 p.m. Judgment reserved.

PROCEDURE FILE 6353.

In the Matter of the Application by Hiram C. Walker, et al, Owners, under "The Planning and Development Act," for approval of plan of part Farm Lot 100, McNiff's Survey (formerly in Concession I, Township Sandwich East), now in Ford City, County of Essex.

Nov. 22nd. Objection filed by Town of Ford City.

Nov. 26th. Application and material filed.

Dec. 16th. Hearing, pursuant to Appointment, 10.30 to 11.30 a.m Adjourned "sine die" pending negotiations. (See Reporter's Notes).

LIST OF APPLICATIONS IN RESPECT OF PROVINCIAL RAILWAYS DURING 1920.

	Procedure File	Procedure File Plan
Canadian Freight Classification No. 16—(Supplement No. 13)	4170	....
Canadian Freight Classification No. 16—(Supplement No. 15)	4170	....
Fort William—Approval By-law No. 1993, Increase in passenger fares, Port Arthur-Fort William Electric Street Railway	6067	....
Fort William—Approval extension of Municipal Electric Street Railway on City Road	6374	....
Grimsby East—Petition Jno. Hunter, et al, for winter trolley service on Hamilton, Grimsby & Beamsville Electric Railway	6331	....
Hydro-Electric Power Commission—Approval plan, etc., transfer track to International Railway	5783	....
Hydro-Electric Power Commission—Approval plan overhead bridge (Montrose Disposal Ry.) across Welland Road, Lot 157, Township Stamford	5853	....
Hamilton Street Railway—Approval King Street West Extension	6165	320
Hamilton, Grimsby & Beamsville Electric Railway—Winter trolley service from Grimsby East (Petition Jno. Hunter, et al)	6331	....
Hunter, Jno., et al—Petition for winter trolley service from Grimsby East on H. G. & B. Railway	6331	....
Highways (Public), Department of—Change of location of Hamilton, Grimsby & Beamsville Electric Railway at Lot 19, Con. II and III, Township Saltfleet	6363	....
Hamilton, Grimsby & Beamsville Electric Railway—Change of location of tracks at Lot 19, Con. II and III, Township Saltfleet	6363	....
Hamilton Street Railway Company—Opening for temporary traffic of extension on King Street West, between Margaret Street and westerly limits of McKittrick Bridge, in City of Hamilton	6404	....
International Transit Company—Approval James Summerhayes as Examiner of Motormen	5642	....
International Railway Company—Plan, etc., transfer track of Hydro-Electric Power Commission	5783	....
International Transit Company—Approval of amended tariff of fares	6287	....
London Street Railway—Strike of Employees	5892	....
Mimico—Determination of amount payable to Toronto & Hamilton Highway Commission re removal of tracks of Toronto & York Radial Railway Company	6126	....
New Toronto—Determination of amount payable to Toronto & Hamilton Highway Commission re removal of tracks of Toronto & York Radial Railway Company	6126	....
Ontario—Department of Public Highways—(See "Highways").		
Port Arthur, Public Utilities Commission of—Approval By-law No. 4, Increase in passenger fares, Port Arthur-Fort William Electric Street Railway	6067	....
Port Arthur-Fort William Electric Street Railway—Approval new tariff of passenger fares	6067	....

	Procedure File	Procedure File Plan
Stamford, Township of—(See "Hydro-Electric Power Commission").		
Toronto & York Radial Railway Company—General classification to govern freight tariffs, Supplements Nos. 13 and 15, to Canadian Freight Classification No. 16	4170	...
Toronto & York Radial Railway Company—Determination of amounts payable to Toronto & Hamilton Highway Commission re removal of tracks in New Toronto and Mimico	6126	..
Toronto Civic Railway—Operation of One-man Cars	5952	...
Toronto Railway Company—Employees' strike, June 1920	6002	...
Toronto Railway Company—Toronto Trades & Labour Council—Application for operation by the Board of the Company's cars	6004	....
Toronto Trades & Labour Council—Operation by the Board of Toronto Railway Company's cars	6004	....
Toronto & Hamilton Highway Commission vs. Toronto & York Radial Railway, et al—Determination of amounts payable by Respondents re removal of tracks of Railway Company in New Toronto and Mimico	6126	....
Waterloo-Wellington Railway Company—Passenger fares	6387	...

APPLICATIONS TO THE BOARD FOR VALIDATION OF BY-LAWS UNDER SECTION 295 OF "THE MUNICIPAL ACT."

(Abbreviation "I.C." means Irregularities Cured. Abbreviation "I" means Irregularities not Cured).

Municipality	By-law No.	Purpose	Amount	Procedure File
Almonte	658	Extensions to Electric Power Plant	$25,000 00 I.C.	5749
Alexandria	323	Extensions to Electric Power Plant	40,000 00 I.C.	5757
Brampton	672	Bonus loan to Universal Batteries, Limited	15,000 00 I.C.	5688
Brockville	B-1206	Local Improvements	17,425 00	5710
"	B-1205	Local Improvements	634 00	5711
"	B-1209	Purposes of Fire Department	5,750 00	5712
Barton, Township of	1197	Stone Quarry	8,500 00 I.C.	5734
Bruce, Township of	293	Telephone System	12,000 00	5844
Brampton	683	Concrete Road, etc	45,533 12 I.C.	5874
"	686	Local Improvement	26,404 24 I.C.	6112
Belleville	2257 (Con.)	Local Improvement	38,306 09 I.C.	6174
Bonfield, Township of	11 (1920)	Local Improvements	6,000 00 I.C.	6207
Brockville	B-1296	Public School	37,500 00	6268
Casselman	236 (amended)	Street Improvements	14,000 00 I.C.	6026
Cobourg	1224	Bonus Loan to Langslow Fowler Company	50,000 00 I.C.	6172
Cochrane	224	Waterworks Extension	5,500 00	6333
"	251	Purchase of Power Plant	65,000 00	6354
"	252	Purchsae of Telephone System	32,000 00	6355
East Flamboro, Township of	660	Portion of Corporation's share of cost of construction of Toronto-Hamilton Highway	29,576 35	5854
East Whitby, Township of	850 (amended)	Public School Purposes	45,000 00 I.C.	6051
Etobicoke, Township of	1277	Local Improvement	17,361 15 I.C.	6231
Essex Border Utilities Commission	6	Sewers, etc	117,615 00	6234
Emo, Municipality of	248	Public School Purposes in S.S. No. I, Tp. Carpenter	8,000 00	6335
Emo, Municipality of	249	Public School Purposes in S.S. No. 5, Tp. Lash	35,000 00	6336
Eastview	362 (Con.)	Local Improvement	11,218 00	6384
"	364	Local Improvement	13,385 00	6385
Fort William	1923	Public School Purposes	230,000 00	5730
"	1924	Collegiate Institute Purposes	87,000 00	5731
"	1940	To complete new wing of Collegiate	20,000 00	5732
Fort Frances	628	Sewers	7,880 00 I.C.	6171
"	646	Roadmaking machinery	4,600 00	6371

APPLICATIONS TO THE BOARD FOR VALIDATION OF BY-LAWS UNDER SECTION 295 OF "THE MUNICIPAL ACT."

(Abbreviation "I.C." means Irregularities Cured. Abbreviation "I" means Irregularities not Cured).

Municipality	By-law No.	Purpose	Amount		Procedure File
Galt	1500	Local Improvements—Sidewalks	11,734 88		5845
"	1532	Soldiers' Memorial Home	15,000 00		5898
Grey, County of	813	Building and repairing bridges	20,000 00		5938
Galt	1558	Grand Stand in Dickson Park	15,000 00	I.C.	6057
"	1593	Local Improvements	4,101 69		6379
Hanover	273	Grist Mill	30,000 00	I.C.	5724
"	275	Construction of drains	3,500 00	I.C.	5725
Hilliard, Township of	119	Telephone System	4,000 00		5826
Hawkesbury	306	Bonus to Geo. Kennedy White, et al	19,000 00		5983
"	313	Sewers, etc.	65,000 00		5984
Hamilton	2369	Waterworks Extensions, etc.	58,300 00	I.C.	6058
Hanmer, Tp. of (Separate School Board of S. S. No. 1)	1	Separate School Purposes—School House, etc.	3,000 00		6073
Havelock	309 (amended)	Electric Power Distribution Plant	28,900 00		6074
Hespeler	394	Public School	55,000 00	I.C.	6273
Hanover	285	Bonus Loan to Hanover Cotton & Woollen Mills, Limited	30,000 00		6283
Ingersoll	877	Bonus Loan to Dominion Cone Co. and Folding Paper Boxes, Ltd.	25,000 00		6148
"	879	Local Improvements—Pavements	36,000 00	I.C.	6160
Kitchener	1555	Waterworks Extensions	30,000 00	I.C.	5702
Kingston	37 (1920)	Local Improvements—Pavements	102,989 38	I.C.	6022
Kenora	781	Pumping Engines	20,000 00	I.C.	6114
Kincardine	765	Hydro-Electric System	40,000 00	I.C.	6135
Listowel	770	Waterworks Construction	5,000 00		6064
Leamington	905 (amended)	Waterworks Construction	54,576 00	I.C.	6092
Lancaster	390	Electric Power Distribution Plant	13,000 00		6383
Mimico	306	Local Improvement—Sidewalks	2,710 00	I.C.	5714
McDougall, Township of	173	Nobel Consolidated School	10,000 00		6214
New Toronto	304	Fire Protection	1,500 00		5748
"	360 (Con.)	Local Improvement	35,233 00		6293
Owen Sound	1915	Waterworks Extensions	10,000 00		5709
Orillia	698	Sewers	20,000 00	I.C.	6066
Oliver, Township of	198	Remodelling of Township Hall at Murillo	4,000 00		6120

APPLICATIONS TO THE BOARD FOR VALIDATION OF BY-LAWS UNDER SECTION 295 OF "THE MUNICIPAL ACT."

(Abbreviation "I.C." means Irregularities Cured. Abbreviation "I" means Irregularities not Cured).

Municipality	By-law No.	Purpose	Amount	Procedure File
Oshawa	1481	Waterworks Extensions	250,000 00 I.C.	6161
"	1482	Bridges	10,000 00 I.C.	6162
"	1502	Local Improvements	78,743 88 I.C.	6359
Orillia	730	Pavements, etc.	285,000 00 I.C.	6373
Picton	743	Waterworks Extensions	9,000 00 I.C.	5785
Pembroke	839 (Con.)	Local Improvements	37,439 75	5998
Prescott and Russell, Co. of	777	Roads and Bridges	200,000 00	6072
Port Colborne	51 (1920)	Continuation School Purposes	115,000 00 I.C.	6178
Parry Sound	522	Completion of Hydro Electric Light and Power Plant	75,000 00	6290
Pembroke	856	Public School Purposes	14,000 00	6351
"	860	Payment of overdraft	33,000 00 I.C.	6352
Port Colborne	56 (1920)	Public Park	19,500 00	6388
Renfrew	907	Fire Hall, etc.	30,000 00 I.C.	5643
"	944	Good Roads	150,000 00 I.C.	5668
Rainy River	224	Sidewalks	14,094 15	5669
"	230	Telephone System	6,000 00	6259
Strathroy	1010	Local Improvements	64,451 20	5698
Sarnia	1127	Local Improvements	6,460 00 I.C.	5843
"	1142	Intake Pipe and Watermain	35,000 00 I.C.	5870
Streetsville	578	Tarvia Macadam Roadway, etc.	15,000 00 I.C.	5908
Sandwich East, Township of	828	Local Improvements	41,094 84	5909
Sandwich East, Township of	829	Local Improvements	14,935 97	5910
Sudbury	669	Technical High School Site	6,000 00	6039
"	673	Public School	53,000 00	6040
"	674	Technical School	61,141 00	6041
Sarnia	1187	Local Improvements	43,850 06 I.C.	6141
"	1198	Bond Indebtedness—Gas and Electric Light Equipment	128,000 00 I.C.	6253
St. Clair Beach, Village of	36	Local Improvement	52,726 51 I.	6390
St. Mary's	404 (amended)	School Purposes	10,000 00	6406
Tara	312	Hydro Electric Power Distribution Plant	8,000 00 I.C.	5784
Thessalon	15 (1919)	Bonus to Box Factory	4,000 00 I.C.	5805
Thorold, Township of	662	Local Improvement Sewers	7,832 00 I.C.	5847

APPLICATIONS TO THE BOARD FOR VALIDATION OF BY-LAWS UNDER SECTION 295 OF "THE MUNICIPAL ACT."

(Abbreviation "I.C." means Irregularities Cured. Abbrevation "I" means Irregularities not Cured)

Municipality	By-law No.	Purpose	Amount	Procedure File
Trout Creek	52	Electric Light and Power Plant	8,000 00 I.C.	5859
Toronto, Township of	912	Corporation's Share of cost of construction of Toronto and Hamilton Highway	74,675 85	6018
Tay, Township of	789	Construction, etc., of "The North River Telephone System."	4,500 00	6158
Toronto	6674	General Consolidated Loan	23,000 00	2209
Walkerville	751 (Con.)	Local Improvements	14,439 13 I.C.	5684
Windsor	2469	Patriotic Purposes	10,000 00 I.C.	5875
Wroxeter	8 (1919)	Sidewalks	5,000 00 I.C.	6103
Whitney, Township of	70	School at Porcupine	12,000 00 I.C.	6180
Windsor	2517	Improvements to Incinerator Plant	17,000 00 I.C.	6239
"	2518	Motor Truck Street Flusher	12,000 00 I.C.	6240
"	2519	Concrete Sidewalks	40,000 00 I.C.	6241
"	2568 (Con.)	Local Improvements	107,547 81 I.C.	6242
Walkerville	800 (amended)	Technical School	12,500 00	6246
Welland	147	Public School in Ward No. 1	100,000 00	6255
Whitby	1036	Public School	60,000 00 I.C.	6279
Watford	4 (1919) (amended)	Water System	52,000 00 I.C.	6312
York, Township of	4729	Construction of Waterworks System	10,294 58	5763
"	4730	Construction of Waterworks System	9,264 98	5764
"	4731	Construction of Waterworks System	2,548 20	5765
"	4732	Construction of Waterworks System	8,180 24	5766
"	4968	To complete and equip Public School S. S. No. 26	40,000 00 I.C.	5828
"	5014	Public School Purposes S. S. No. 7	14,585 00	5967
			$4,359,538 05	

LIST OF BY-LAWS APPROVED BY THE BOARD UNDER SUBSECTION (3) OF SECTION 400 OF "THE MUNICIPAL ACT."

Municipality	By-law No.	Purpose	Amount	Procedure File
Alliston	350	Extensions to Hydro Electric System	$8,000 00	5829
Brantford	1613	Waterworks Purposes	150,000 00	6046
Bridgeburg	408	Waterworks Extensions	15,000 00	6370
Beaverton	5 (1920)	Hydro-Electric Power System Extensions	2,500 00	6381
Chatham	1589	Extensions to Electric Power System	90,000 00	5966
Dunnville	13 (1919)	Electric Power Distribution Plant	12,500 00	5717
Elmira	436	Waterworks Extensions	5,000 00	6084
"	438	Sewers	27,500 00	6085
"	439	Waterworks Extensions	2,000 00	6350
Gravenhurst	P. 71	Waterworks Extensions	5,000 00	5769
"	P. 75	Waterworks Extensions	2,000 00	6277
Hamilton	2369	Waterworks Extensions	58,300 00	5900
Hanover	292	Extension to Hydro Electric System	15,500 00	6261
Kitchener	1555	Waterworks Extensions	30,000 00	5644
"	1595	Extensions to Gas Works	20,000 00	6338
Leamington	905	Waterworks Extensions	54,576 00	6006
Listowel	770	Waterworks Extensions	5,000 00	6007
London	6167	Extensions to Electric Light and Power Plant	80,000 00	6149
London	6168	Waterworks Extensions	85,000 00	6150
Mitchell	66 (1919)	Waterworks Extensions	12,000 00	5694
Mara, Township of	547	Extensions to Hydro Electric Power System	1,500 00	5830
Niagara Falls	937	Extensions to Hydro Electric System	33,000 00	6093
Nuestadt	43	Extensions to Hydro Electric Power Distribution Plant	6,000 00	6382
Oakville	613	Waterworks Extensions	45,000 00	6152
Parry Sound	522	Completion of Electric Light and Power Plant	75,000 00	6011
Picton	783	Waterworks Extensions	5,000 00	6065
Port Dalhousie	404	Extension to Electrical System	5,000 00	6262
Preston	778	Waterworks Extensions	31,000 00	6281
Renfrew	951	Sewerage Extensions	10,200 00	6023
Rainy River	232	Waterworks Extensions	9,000 00	6024
Richmond Hill	297	Extensions to Electric Light and Power System	2,000 00	6243
St. Thomas	2401	Extension to Gas Works	11,000 00	5677
Stamford, Township of	2	Extensions to Electrical System	20,000 00	5718

LIST OF BY-LAWS APPROVED BY THE BOARD UNDER SUBSECTION (3) OF SECTION 400 OF "THE MUNICIPAL ACT."

Municipality	By-law No.	Purpose	Amount	Procedure File
St. Thomas	2407	Waterworks Extensions	60,000 00	5762
Smiths Falls	1435	Extensions to Sewer System	3,133 00	6163
Sarnia	1198	Bond Indebtedness re Gas and Electric Light Equipment	128,000 00	6166
St. Marys	411	Extensions to Electrical System	16,000 00	6169
"	416	Waterworks Extensions	6,000 00	6256
Seaforth	212 (1920)	Waterworks Extensions	35,000 00	6267
Smiths Falls	1444	Certain Capital Expenditures re Hydro Electric System	9,200 00	6288
Scarborough, Township of	1045	Extensions to Hydro Electric Power Distribution System	24,000 00	6334
St. Thomas	2433	Extensions to Gas Mains, etc.	50,000 00	6386
Walkerville	760	Hydro Electric System Extensions	25,000 00	5735
Wellington	330	Electric Light Extensions	3,000 00	5743
Wallaceburg	613	Extensions to Hydro Electric System	30,000 00	5799
Windsor	2523	Extensions to Hydro Electric System	150,000 00	5907
"	2539	Extensions to Waterworks System	150,000 00	5986
Wingham	832 (1920)	Waterworks Extensions	12,000 00	6157
Waterloo	680	Electric Light Extensions, etc.	40,000 00	6218
"	681	Waterworks Extensions, etc.	40,000 00	6219
"	682	Extensions, etc., to Gas Works and Distribution Plant	15,000 00	6220
Wyoming	343	Extensions to Hydro Electric System	3,200 00	6367
			$1,733,109 00	

LIST OF APPLICATIONS FILED WITH THE BOARD FOR APPROVAL OF PLANS UNDER "THE LAND TITLES ACT," AS AMENDED.

Owner	Description of Property	Procedure File
Auer, Chas. M.	Part south half of Lot 1, Con. III, Township of Mountjoy, District Temiskaming	6316
Canadian Northern Town Properties, Limited	Addition to Atikokan Town Plot	6153

LIST OF APPLICATIONS FILED WITH THE BOARD FOR APPROVAL OF PLANS UNDER "THE PLANNING AND DEVELOPMENT ACT."

Owner	Description of Property	Procedure File
Alexander, G. A., et al	Part Farm Lots 69 and 70, Tp. Sandwich West	5780
Acton Tanning Co., Ltd.	Part Lot 27, Con. III, Tp. Esquesing, and partly in Acton	5742
Awrey, Bruce B.	Block "B," Reg. Plan 210, being part Lot 243, south of Talbot Road—formerly Tp. Mersea, now in Town of Leamington	5838
Arnold, Henry G.	Lot 2, Reg. Plan 54, Town of Sandwich	5964
Aaron, Chas. D.	Part Lot 30, Con. II, Tp. Sandwich West	5975
Adare, Elizabeth, et al	Lots Q, R, S, T and U, Plan 1098, Lots 16 and 19, Plan 197, and parts Lots L, M, N, O and P, Plan 408, Toronto	6375
Adare, Frank, G. A.	See "Adare, Elizabeth, et al."	
Bezaire, O., and Alex.	Farm Lot 70, Con. I, Tp. Sandwich West	5707
Boucher, A. F.	Part Farm Lot No. 19, Con. I, Tp. Sandwich West	5721
Bechard, Francis X., et al	Part Lot 32, Con. I, Tp. Sandwich West	5814
Barnum, J. F.	See "Thomas, Mary Jane."	
Bezaire, Irene	See "Reaume, Henry."	
Brown, A. S.	Part Farm Lot No. I (formerly in Con. I, Tp. Gosfield South) now in Town of Kingsville	6015
Brunner, Mond, Canada, Ltd.	Parts Farm Lots 3, 4 and 5, Con. I, Tp. Anderson, Co. Essex	6132
Bain, W. A.	Part Lot 16, Gull River Range, Tp. Bexley	6254
Bruder, C. J.	Part Lot 1, B. L. Eby's Survey, and part Lot 17, German Co. Tract, City of Kitchener	6402
Cugell, Simon, et al	Part Lot 23, Con. I, Tp. Anderson	5943
Capreol Townsite, Ltd.	Part Lot 10, Con. VI, Tp. Capreol (Dist. Sudbury)	5957
Connolly, Mary	Part Block "C," Con. IV, Tp. Brantford	5981
Crystal Park Co., Ltd.	Parts Lots 29, etc., Reg. Plan 72, Tp. Bertie, etc. ("Dreamland")	6083
Carroll, J. K.	Part Farm Lot 21, Con. I (formerly in Township), now in City of Kingston	6142
Crystal Park Co., Ltd.	Part Lot 25, B.F. Concession on Lake Erie, Tp. Bertie (Co. Welland)	6144
Clayton, Percy G.	See "Adare, Elizabeth."	
Calkins, Thos. J., et al	Farm Lot 64, Con. II, and part Farm Lot 64, Con. I, Tp. Sandwich West	6380
Dent, G. M., et al	Lots 39 and 40, Reg. Plan 389, Tp. Etobicoke	5822
Dudley, Frank A., et al	Lots 1, 2, 3, 4 and right of way, and part Lot 13, Reg. Plan D. 151, Toronto	5926
Dominion Rubber System Housing Co.	Lots 525 to 530, plan 248, etc., Waterloo	5985
Davies, Robt., Estate of	Parts Lots 12 and 13, Con. II, Tp. York	6063
Denison, Gordon C., et al	Part Block "A," Reg. Plan 313, and parts lots 28 28 and 29, Reg. Plan D. 6, Toronto	6229
Dominion Rubber System Housing Co. (Kitchener), Ltd.	Lots 1 to 64 (incl.), Plan 258, and part Lot 15, German Co. tract, City of Kitchener	6317

Owner	Description of Property	Procedure File
Essex Land Town & Improvement Co., Ltd.	Part Farm Lot 74, Con. I, Tp. Sandwich West	5722
Edmondson, Hannah M.	Block 78, Village of Port Dover, Co. Norfolk	5781
Essex Border Utilities Commission	Plan showing urban zone boundary of the Essex Border District	6314
Essex Real Estate Co., Ltd.	Part Farm Lot 93 (McNiff's Survey), Plan 747, City of Windsor	6330
England, Percy J.	See "Calkins, Thos. J."	
Fields, Ulysse, H.	Part Farm Lot 51, Con. II, Tp. Sandwich West, Co. Essex	5790
Ford, Homer, et al.	Part Lot 552, Grange's amended Survey, and Lot 8, Plan 165, Kitchener	5941
Frank, Fred	See "Ford, Homer."	
Falls, W. S., et al.	Part Lots 2 and 3, Reg. Plan No. 7, Town of Amherstburg	6124
Field, Hector	Part Lot 48, Con. II, Tp. Sandwich West	6151
Fleming, Erroll R., et al.	Part Gore Lot, Indian Reserve, Town of Sandwich	6215
Freese, Chas. E.	Part Lots 129 East 130 and 131, Con. I, Tp. Sandwich East	6269
Fitch, Charlotte	Part Lot 5, in subdivision of property of late Jno. Dynes, and being part of Burlington Beach, Tp. Saltfleet	6285
Gilbert, Milton H.	West part Lot 25, Con. II, Tp. Sandwich West	5850
Graeher, Louis H.	Part Lot 24, B.F. Con. Lake Erie, Tp. Bertie, Co. Welland	5919
Gray, George Wm.	Part Lot 7, and Lots 8, 9, 10, 11, 14 and 15, Reg. Plan 44, Town of Sandwich	5922
Gray, Jno. V.	Parts Lots 3 and 4, Reg. Plan 54, Town of Sandwich	6131
Girardot, Julia	Lots 3, 4 and 5, Reg. Plan 52, and Block B, Reg. Plan 548, Town of Sandwich	613
Greater Hamilton Development Co. Ltd.	Parts Lots 33 and 34, Con. II, Tp. Saltfleet	6145
Grimsby Beach, Ltd.	Parts Lots 3 and 4, Con. I, Tp. North Grimsby	6274
Healy-Page Chappus, Ltd.	Part Lot 36, Con. I, Tp. Sandwich West	5846
Hibbard, Murray H., et al.	Part Lot 24, B.F. Con., Lake Erie, Tp. Bertie	5955
Hunt, Richard, et al.	Parts Lots 7 and 8, in Jno. Hill's subdivision of part Lot 11, Con. IV, Tp. Barton	6059
Irwin, Eli F.	Part Lots 30 and 31, Con. B (Humber), Tp. Etobicoke	6090
Irwin, Eli F.	Part Lot 19, Con. "C" (Humber), Tp. Etobicoke	6170
Janisse, Charlotte	Part east half Lot 109, Con. I, Tp. Sandwich East, now in Ford City	5879
Jacques, Lwellyn	Farm Lot 63, Con. II, Tp. Sandwich West	5948
Laskey, Jacob B.	Part Farm Lot 115, Con. I, Tp. Sandwich East	5663
Ladue, Mary N., et al.	Part Lot 103 (McNiff's Survey), Con. I, Tp. Sandwich East	5996
Linton, Wm. R., et al.	Lots 1, 2, 3, 4, 5, 6 and 7, Reg. Plan 309, Re sub division of Lots 27, 28, 29 and 30, Reg. Plan 207, Town of Essex	6247
Lubetsky, Jacob	Part Lot 127, Con. I, Tp. Sandwich East	6309
Montreuil, Elizabeth M., et al.	Part Farm Lot 97, Con. I, Tp. Sandwich East, now in Ford City	5681
Muir, J. P., Estate of	Part Lots 1, 2, 3, 4, 5, 6, 7 and part Lot 11, Con. IV, Tp. Barton	5851
Moore, Samuel J., et al.	West part of south half Lot 16, Tp. Malden, Co. Essex	5932
Marsh, Wm. Edson	Part Lot 26, Con. I, Tp. Cornwall (unincorporated Village of Mille Roche)	5958
Martin, J. Dewitt	Block V, Reg. Plan 54, Town of Sandwich	6091
Mettawas Co., Ltd.	Lots 1 to 18 (incl.), Reg. Plan 269, etc., Town of Kingsville	6185

Owner	Description of Property	Procedure File
McAlpine, A. J.	Parts Blocks McA 3, 4 and 5, Reg. Corporation Plan of Town (now City) of Welland	5942
McCarron, E., et al.	Part Lot 4, Con. II, Div. G., Tp. Guelph (Extension of McDonald Ave.)	6156
Osterhout, Peter, et al.	Part Farm Lot 87, City of Windsor	5691
Ouellette, Patrice	Part Farm Lots 85, 86 and 87, Con. II, City of Windsor	5869
Osterhout, Peter	Lots 14, 15 and 16, Plan 128, East side of Howard Ave., City of Windsor	5896
Ottawa Land Association	Part Scott and Wellington Streets, and Skeads Road and Caroline Ave., Ottawa	5917
Ottawa Land Association	Amending Plans 15797586 and 127961	5918
O'Neil, Geo. H.	See "Dudley, Frank A."	
Oshawa Housing Commission	Part Lot 9, Con. I, Tp. Whitby East, Town of Oshawa	6056
Ottawa Land Ass'n., Ltd.	Part Lots 34 and 35, Con. I, Township of Nepean, City of Ottawa	6159
Osborne, J. R., et al.	Part north east half of Lot 3, Con. XIII, Tp. McNab, Town of Arnprior	6213
Ottawa Land Ass'n., Ltd.	Part Lot 35, Con. "A" Ottawa Front, Tp. Nepean, and a redivision of Lots 113 to 194 (incl.), Plan 258.	6329
Pratt, Theodore	Part Farm Lot 101, Con. I, Town of Ford City	5770
Pilkey, Chas. J., et al.	Part Lot 26, B.F. Con., Lake Erie, Tp. Bertie, Crystal Beach	5965
Purdom, Alex	Part Lot 1, south of Erie Street, Reg. Plan 117, Village of Port Stanley, Co. Elgin	6020
Phin, Jno. A.	Part Tp. Lot 10, Con. I, City of Toronto	6062
Parker, W. C.	Parts Lots 25, 26 and 27, Reg. Plan 83, Tp. Etobicoke	6343
Rowe, W. B.	Part Lot 8, Con. I, Tp. Whitby East, now in Town of Oshawa	5807
Reilly, Frank P.	See "Bechard, Francis X."	
Raleigh, John J.	Part Lot 33, Con. I, Tp. Sandwich West	5916
Reaume, Henry, et al.	Part Farm Lots 29 and 30, Con. I, Tp. Sandwich West	5968
Reaume, Ulysses G.	Part Farm Lot 109, Block "G," Reg. Plan 907, and Farm Lot 109, Con. I, Tp. Sandwich East	5987
Robinet, Jules	Part Farm Lot 47, Con. II, Tp. Sandwich West	6164
Rumpel, Oscar	Part Lots Nos. 2 and 17, German Co. Tract, City of Kitchener	6403
Shepherd, Thos., et al.	See "Wilkinson, Arthur."	
St. Clair Beach, Ltd.	Part Lot 1 and Gore in front thereof, west of Pike Creek, Village of St. Clair Beach, Co. Essex	5776
Schultz Bros. Co., Ltd.	Part Lots 1 and 6, and Lots 2, 3, 4, 5, north side of Waterloo St., City of Brantford, ("Waterloo Court")	5782
St. Catharines Housing Commission	Lots 69 to 73 (incl.), Reg. Plan 100, City of St. Catharines	5825
Stacey, John	Part Lots 9 and 10, Con. I, Town of Oshawa	5872
Stephens, E. T., Ltd.	Part Lots 11 and 12, Con. I fronting toward the Lake, Tp. Etobicoke	5931
Schlee, Geo., et al.	Part Lot 2, German Co. Tract, City of Kitchener	5970
Stephens, E. T., Ltd.	Part Lot 10, Con. II (Col. Smith's tract), Tp. Etobicoke	6082
Simons, David W.	Block 5, Reg. Plan 58, and part Block "A," Reg. Plan 520, City of Windsor	6113
Scott, W. A.	Part Lot 104, Con. II, Township of Tay	6122
Secord, Margaret	Part Lot 9, Con. II, Tp. Colchester South	6143
Smith, Wm. S., et al.	Part Farm Lots 13 and 14, B.F., Con., Tp. Gosfield South	6184
Stephens, E. T., Ltd.	Part Lots 11 and 12, B.F. of Con. I, Southern Division, and 11 of Con. I, Tp. Etobicoke	6294
Shropshire Estates, Ltd.	Part Lot 8, Con. II, south of Dundas St., Tp. Toronto, Co. Peel	6310
Trainor, Jno.	See "Dent, Geo. M."	

Owner	Description of Property	Procedure File
Thomas, Mary Jane, et al.	Part Tp. Lot 9, Con. II, Tp. Whitby, Town of Oshawa	5852
Tuson, C. R., et al.	Parts Lots 33 and 34, Con. I, Tp. Sandwich West	5897
VanLuven, Elizabeth	See "Thomas, Mary Jane."	
Wilkinson, Arthur, et al.	Part Lot 9, Con. II, Town of Oshawa	5682
Windsor Security Co. of Canada, Ltd.	Part Farm Lot 68, Con. I, Tp. Sandwich West	5706
Winspear, Robt. U.	See "Pilkey, C. J."	
Walkerville Realty, Ltd., et al.	Parts Lots 92, 93, 94 and 95, Con. II, Tp. Sandwich East	5994
Walkerville Realty Ltd., et al.	Parts Lots 95 and 96, Con. II, Tp. Sandwich East	5995
Walker Sons, Ltd.	See "Walkerville Realty, Ltd."	
Walkerville Land & Building Co., Ltd.	Part Farm Lot 94 (McNiff's Survey), Town of Walkerville	5997
Westcott, Rolo, et al.	Part Farm Lot 5, Con. I, Eastern Division, and Lots 15 to 21 (incl.), Plan 852, Tp. Gosfield South, Co. Essex	6098
Wigle, J. A. K., et al.	Part Farm Lots 13 and 14, B.F. Con., Tp. Gosfield South	6184
Wanenmacher, Geo. C.	East half Lot "C," and west part Lot 12, fronting on Lake Shore, Reg. Plan 2371 of Military Reserve, Tp. Bertie, Co. Welland	6244
Walker, Hiram C., et al.	Part Farm Lot 100 (McNiff's Survey), formerly Con. I, Tp. Sandwich East, now in Ford City	6353

APPROVAL OF DEEDS AND MORTGAGES UNDER SECTION 11 OF "THE PLANNING AND DEVELOPMENT ACT."

Parties	Description of Property	Procedure File
Allen, Arthur	See "Mullen, Edward."	
Barthelet, Louis	See "Pinard, Adolphe."	
Brunet, Omer	See "Leveque, Elzear."	
Brown, Colborne	Deed from Elizabeth Loney—Part Lot J, Batt. One, west side of Prospect Street, Village of Port Stanley	6068
Brown, Colborne	Deed to Thos. Baker—Part Lot J, Batt. One, west side of Prospect Street, Village of Port Stanley	6068
Baker, Thos. H.	See "Brown, Colborne."	
Canadian Northern Ontario Railway Co.	See "Hurdman, Agnes Caroline."	
Ethier, Joseph	See "Kirk, Jas. W. A., Estate of."	
Gorman, Wm.	See "Miller, Chas. J."	
Grand Trunk Railway Co.	Deeds to Walter McKeown & Hobbs Manufacturing Co.	5925
Hurdman, Agnes Caroline	Deed to Canadian Northern Ontario Ry.—Right of Way across north-west quarter Lot 12, Junction Gore, Tp. Gloucester, Co. Carleton (1 69/100ths acres)	5653
Hand, Thos., Estate of	Deeds to John Roland Hand and Selwyn Ewart Hand	5728
Hand, John Roland	See "Hand, Thos., Estate of."	
Hand, Selwyn Ewart	See "Hand, Thos., Estate of."	
Hobbs Manufacturing Co., Ltd.	See "Grand Trunk Railway Co."	
Hammond, Jas., Estate of	Deed, and Mortgage back, to Alvina Lamont—Part Lot 5, Con. IX, Tp. Yarmouth, Co. Elgin	6005
James, Thos. O.	Deed to Tom Smith—Part Lot 25, east side Chatham Street, City of Kingston	5697
Kirk, Jas. W. A., Estate of	Deed to Joseph Ethier—Part Lot 23, Con. I, Ottawa Front, Tp. Gloucester	5882

Parties	Description of Property	Procedure File
LeSage, Wm. Geo.	Deed to Kiro Miroff—Part Farm Lot No. 1, Con. west of Great Cataraqui River, Tp. Kingston, now in City of Kingston	5758
Leveque, Elzezr	Deed and Mortgage back to Omer Brunet—Part Lot 27, Con. II, Tp. Gloucester, Ottawa Front, Co. Carleton	5866
Lamont, Alvina	See "Hammond, Jas., Estate of.'	
Loney, Elizabeth	See "Brown, Colborne."	
Miroff, Kiro	See "LeSage, Wm. Geo."	
Mullen, Edward	Deed to Arthur Allen—Part Lot 4, Con. VIII, Tp. Yarmouth, City of St. Thomas	5813
Miller, C. J.	Deed to Wm. Gorman—South half Lot 15, Junction Gore, Tp. Gloucester	5842
Mills, Nathaniel	Deed to Francis Wm. Smythe—Parts Lots 6 and 7, east side Wortley Road, Plan 444, City of London	6134
McKeown, Walter	See "Grand Trunk Railway Co."	
Pinard, Wm. Adolphe	Deed, and mortgage back to Louis Barthelet—Part west half Lot 22, Con. II, Ottawa front, Tp. Gloucester	5645
Robinson, Oliver	Deed to Edwin M. Robinson—Part east half of Lot "I," Con. "A" Rideau Front, Tp. Nepean	5678
Robinson, Edwin M.	See "Robinson, Oliver."	
Smith, Tom	See "James, Thos. O."	
Shorter, Percy	See "Woodruff, W. D."	
Smythe, Francis Wm.	See "Mills, Nathaniel."	
Woodruff, W. D.	Deed to Percy Shorter—Lot 48, Reg. Plan 51, Town of Merritton, Co. Lincoln	5976

MISCELLANEOUS MATTER.

ANNEXATIONS.

		Procedure File
Hamilton, City of	Annexation to of part Township Barton (Tebbs Petition)	5696
Windsor, City of	Annexation to of part Township Sandwich West (Petition of Jas. Anderson)	5745
Walkerville, Town of	Annexation to of part Township Sandwich East (Petition Walker Sons, Ltd.)	5824
Toronto, City of	Annexation to of part Township York (Petition W Harris & Co., et al)	6049
Toronto, Petition of	Annexation to of part Township of York (Petition Robt. Davies Estate)	6109 and
Plummer Additional, Tp. of	Annexation to of part unorganized Township Lefroy —Petition of Robt. Horricks, et al	6109A 6110
Sandwich, Town of	Annexation to of part Township Sandwich West	6181
Chapple, Municipality of	Annexation to of Townships Potts and Richardson	6228
Weston, Town of	Annexation to of part Township York	6251
Grimsby, Village of	Annexation to of part Township North Grimsby	6257
Thessalon, Township of	Annexation to of East part of unorganized Township of Lefroy	6342

ASSESSMENT APPEALS.

		Procedure File
Port Arthur vs. Estate of Frank E. Gibbs	$10,000 00	5647
Port Arthur vs. C. I. Dreifus	60,000 00	5648

		Procedure File
Port Arthur vs. Estate of James Conmee	13,000 00	5649
Port Arthur vs. Davidson & Smith—(Amount not stated—Appeal withdrawn)		5650
Toronto vs. Estate of Annie Hamilton	90,500 00	5662
Hydro Electric Power Commission of Ontario, et al, vs. Niagara Falls	2,705,300 00	5687
Coleman, Township of, vs. Bailey Silver Mines, Limited	66,000 00	6137
Coleman, Township of vs. Dominion Reduction Co., Ltd	45,000 00	6138
London & Port Stanley Railway Co. vs. Village of Port Stanley	113,805 00	6275
Hamilton vs. Hamilton Jockey Club, Limited	315,250 00	6323
	$3,418,855 00	

BILLS—FINANCIAL

(Referred to the Board under Rule 61a of the House).

		Procedure File
Gananoque	Bill No. 20 (1920)—To consolidate floating debt, etc	5789
Orangeville	Bill No. 26 (1920)—To consolidate floating debt, etc	5795
Burlington	Bill No. 38 (1920)—To liquidate floating debt incurred for Patriotic Purposes	5796
Cobourg	Bill No. 40 (1920)—To consolidate floating debt, etc	5819

BRIDGES

(7 Geo. V, Chap. 17, sec. 7).

County of Lambton vs. County of Huron—re Aux Sables River Bridge at Grand Bend	5683

(5 Geo. V, Chap. 18 and amendments).

Toronto & Hamilton Highway Commission—Final Incidence of cost of Mimico Creek Bridge	4166 4278
Toronto & Hamilton Highway Commission—Final Incidence of cost of Credit River Bridge	4353
Toronto & Hamilton Highway Commission—Final Incidence of cost of Etobicoke River Bridge	4354

BRIDGES—BY-LAWS APPROVED

(Section 289 (2) (e) of "The Municipal Act")

Guelph, City of—Approval By-law 1490—Reconstruction of "Victoria Bridge" over Speed River ($16,225.00)	5993

BRIDGES—RELIEF FROM REBUILDING

(Section 460 (9) of "The Municipal Act")

Elzivir, Township of—Bridge over the Scouttematto River, at Lots 15 and 16, Con. XI.	5778

CEMETERIES—INCORPORATION OF ADDITIONAL LAND IN, ETC.

(Section 40 (a) of "The Cemetery Act," as enacted by section 2 of "The Cemetery Amendment Act, 1920")

Marmora—Addition to Cemetery of road allowance between Con. IV and V, Township of Marmora, etc	6130

EXTENSION DEBENTURE ISSUE PERIOD (MUNICIPAL BY-LAWS)

(Section 288 (9) (10) of "The Municipal Act")

Municipality	By-law No.	Purpose	Amount	Procedure File
Peterboro	1906 (amended)	Electric Sub-station, etc.	$50,000.00	5741
Ottawa	4325	Garbage System	50,000.00	6101
Ottawa	4494	St. Patrick Street Bridge	150,000.00	6101
Ottawa	4325	Garbage System	50,000.00	6303
Ottawa	4494	St. Patrick Street Bridge	150,000.00	6305
			$450,000.00	

EXTENSION OF TIME TO PASS BY-LAWS

(Section 280 (5) of "The Municipal Act")
(As enacted by sec. 7, Chap. 33, Ont. Stat. 1914)

Municipality	By-law No.	Purpose	Amount	Procedure File
Charlottenburg, Tp. of.	5	Permanent Road Improvements	$150,000.00	5744
Brantford	1496	Extension to Street Railway	125,000 00	5808
Brantford	1427	St. Paul Ave. Subway	40,000.00	5809
Peterborough	2047	Municipal Fuel Yard	35,000.00	5883
Hanover	285	Bonus to Hanover Cotton & Woollen Mills, Limited	30,000.00	6019
Lakefield	572	Electric System	33,500.00	6286
Watford	4 (1919)	Waterworks System	52,000.00	6341
Cochrane	251	Power Plant	65,000.00	6344
Cochrane	252	Telephone System	32,000.00	6345
Whitby	1036	School Purposes	60,000.00	6365
			$622,500.00	

HIGHWAYS

Toronto & Hamilton Highway Commission—Re Widening of Highway East of O'Connor Road	4278

HIGHWAYS—NARROW

(Section 20 of "The Municipal Amendment Act, 1914")

Bertie, Township of—Approval By-law 917—Plan of unincorporated Village of Stevensville	5664
Cambridge, Township of—Approval By-law 399—Opening of highway on south side of Nation River at a width of 40 feet	6054
Oshawa—Approval By-law 1435—Extending Mary Street southerly at a width of 49′ 6″	6055
Brockville—Approval By-law B. 1263—Opening of Charles Street at a width of 40 feet.	6315
Toronto—Approval By-law 8569—Opening of street adjacent to the Township of Scarborough, from Queen Street southerly to Lake Ontario, at width of 32 feet	6372

HIGHWAYS—PROVINCIAL

(Apportionment of cost—sec. 12 (8) Chap. 16, 1917 (Ont.)

Frontenac, County of, vs. Township Kingston	6042
Frontenac, County of, vs. Township Pittsburg	6043
Carleton, County of, vs. Department of Highways of Ontario (Ottawa & Prescott Highway)	6264

INTEREST INCREASE BY-LAWS

(Sec. 291 of "The Municipal Act")

Municipality	Interest Increase By-law	Debenture By-law	Rate	Purpose	Amount	Proc'd File
Smith's Falls...	1419	1414	5½% ro 6%	Fire Hall............	$25,000.00	5755
Peterborough..	2094	1906	5% to 6%	Electric Sub-station,etc.	50,000.00	5740
Lancaster, Tp. of	8 (1920)	8 (1919)	5½% to 6%	Permanent Road Improvements.........	100,000.00	5746
Smith's Falls...	1423	1396	5½% to 6%	Hydro-Electric System.	14,300.00	5804
Peterborough..	2241	2200	5½% to 6%	Bonus to Nashua Gummed & Coated Paper Co................	57,000.00	5811
Peterborough..	2242	2185	5½% to 6%	Public School Purposes.	240,000.00	5811
Peterborough..	2243	2043	5½ to 6%	High Level Bridge.....	280,000.00	5811
Peterborough..	2244	2227	5½% to 6%	Public Park..........	33,000.00	5811
Woodstock....	1201	1175	5½% to 6%	Bonus to Karn Piano Co	28,000.00	5827
Casselman.....	246	236	5% to 6%	Permanent Street Improvements.........	14,000...	5873
Fort William...	1985	1923	5% to 6%	Public School Purposes.	230,000.00	5885
Fort William...	1986	1924	5% to 6%	Collegiate Institute....	87,000.00	5886
Fort William...	1987	1940	5% to 6%	New Wing for Collegiate Institute........	20,000.00	5887
Fort William...	1988	1941	5% to 6%	Equipment for new wing for Col. Inst.....	10,000.00	5888
Oshawa.......	720	1442	5½% to 6%	School Purposes.......	35,000.00	5972
Brockville.....	B. 1248	B. 1189	5½% to 6%	Manufacturing site....	22,000.00	6052
Brockville.....	B. 1249	B. 1200	5½% to 6%	Manufacturing site....	4,500.00	6053
St. Catharines..	3284	3206	5½% to 6¼%	Public School Purposes.	158,000.00	6075
St. Catharines..	3285	3230	5½% to 6¼%	Cemetery...........	17,000.00	6076
Kenora........	772	770	5½% to 6½%	Consolidated debt debentures............	13,564.87	6077
Kenora........	773	756	5½% to 7%	Electrical Purposes....	10,000.00	6078
Kenora........	775	768	5½% to 7%	Highway Improvements	25,000.00	6079
Kenora........	776	766	5½% to 7%	Local Improvements...	7,775.38	6080
Ottawa........	....	4325	5% to 6%	Garbage System......	50,000.00	6101
Ottawa........	....	4494	5½% to 6%	St. Patrick St. Bridge..	150,000.00	6101
Ottawa........	....	4790	5% to 6%	Col. Institute Purposes	50,000.00	6102
Ottawa........	....	4805	5% to 6%	Civic Hospital........	200,000.00	6102
Ottawa........	....	4810	5% to 6%	Improvements to Carnegie Library Bldg..	5,000.00	6102
Ottawa........	....	4825	5½% to 6%	Public Playgrounds....	50,000.00	6102
Acton.........	498	483	5½% to 6½%	Waterworks Purposes..	40,000.00	6177
Owen Sound...	24	17–18–19	6% to 6½%	Local Improvements...	88,455.02	6179
Oshawa.......	1494	1436	5½% to 6%	Bonus to Pedler People Limited...........	50,000.00	6182
Brampton.....	703	686	6% to 6½%	Local Improvements...	26,404.24	6209
Cornwall......	26 (1920)	9 (1920)	6% to 6½%	Bonus loan to Can. Linoleum & Oilcloths, Ltd	40,000.00	6233
Lakefield......	582	572	6% to 6½%	Electric Power Distribution Plant........	33,500.00	6295
Midland.......	1047	1020	6% to 6½%	Grant to St. Andrew's Hospital...........	30,000.00	6300
Midland.......	1048	1036	6% to 6½%	Purposes of Public School Board.......	50,000.00	6301
Ottawa........	4968	4325	5% to 6%	Garbage System......	50,000.00	6304
Ottawa........	4970	4494	5½% to 6%	St. Patrick St. Bridge.	150,000.00	6306
Watford.......	7 (1920)	4 (1919)	5½% to 6½%	Water System........	52,000.00	6311
Bertie, Tp. of..	936	908	5½% to 6%	Public School Purposes	60,000.00	6318
Whitby.......	1062	1036	5½% to 6½%	Public School Purposes	60,000.00	6324
Port Colborne..	58 (1920)	51 (1920)	6% to 6½%	Continuation School Purposes..........	115,000.00	6337
Scarborough, Township of.	1049	1026	6% to 7%	Waterworks System...	130,000.00	6369
St. Mary's.....	422	404	6% to 6½%	School Purposes.......	10,000.00	6395
St. Mary's.....	423	411	6% to 6½%	Extensions to Electrical System.............	16,000.00	6396
St. Mary's.....	424	416	6% to 6½%	Extensions to Waterworks System.......	6,000.00	6397
					$2,993,499.51	

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	$137,615.00	

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		—B. 1205	Local Improvements......	634.00	
		—B. 1209	Purposes of Fire Dept.....	5,750.00	
Owen Sound...	....	1915	Waterworks Extension....	10,000.00	5815
Galt..........	1613	1500	Local Improvement (sdwlk'	11,734.88	5860
Galt..........	1608	1532	Soldiers' Memorial Home..	15,000.00	5899
Grey, Co. of...	934	813	Bridges, etc..............	20,000.00	5911
Welland.......	195	147	School Purposes..........	50,000.00	6276
Galt..........	1655	1593	Local Improvements......	4,101.69	6346
				$134,645.57	

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TABULATED SUMMARY OF ACCIDENT REPORTS RECEIVED IN 1920

Passengers		Employees		Travellers on Highway		Travellers at Crossing		Trespassers		Total	
Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
4	369	2	12	10	92	.....	.....	.....	.....	16	473

MEMO. OF LEGISLATION UNDER WHICH THE BOARD EXERCISES JURISDICTION

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ASSESSMENT APPEALS.
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Amended 1916, c. 41, sec. 6.
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(And see secs. 439, 453, 458, 468).

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Section 289 (2) (e) of "The Municipal Act."
Approval of, for Extension of Municipal Railway Systems.
Section 232 of "The Ontario Railway Act."
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Section 400 (3) of "The Municipal Act."
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Amended 1915, Chap. 38, sec. 1, and see Chap. 51, Ontario Statutes, 1919.
Approval of Interest Increase By-law.
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Section 289 (2) (f) of "The Municipal Act."
Approval of, to repeal By-laws as to that part of Moneys not raised.
Section 292 of "The Municipal Act."
Validation of, and Debentures.
Section 295 of "The Municipal Act."
Amended 1914, chap. 33, sec. 8.

CONSOLIDATION OF FLOATING DEBT OR CONSOLIDATION OR RENEWAL OF DEBENTURES BY ACT OF LEGISLATURE.
Rule 61a, page 421, Votes and Proceedings of The Legislative Assembly, 27th March, 1907.

DEBENTURES, EXTENSION OF PERIOD FOR ISSUE OF
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ERECTION OF VILLAGES AND TOWNS INTO TOWNS AND CITIES.
Section 20 of "The Municipal Act."

FRANCHISES, APPROVAL OF BY-LAWS GRANTING, R.S.O., Chap. 197, secs. 5 and 6.
Amended 1915, chap. 38, sec. 1.
Amended 1919, Chap. 51.

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Section 12, Chap. 42, Ontario Statutes, 1917.
Provincial supply of.
Section 7, Chap. 13, Ontario Statutes, 1918.

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Section 1, chap. 31, Ontario Statutes, 1917.
Chapter 38, Ontario Statutes, 1918.
Chapter 60, Ontario Statutes, 1920.

INCORPORATION OF TOWNS IN UNORGANIZED TERRITORY.
Section 19 of "The Municipal Act" (see also sec. 66).
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See Section 2, Chapter 32, Ontario Statutes, 1918.

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INTERSWITCHING, ETC., BETWEEN DOMINION AND PROVINCIAL RAILWAYS.
Section 253 (3), Chap. 68, Dominion Statutes, 1919.
Section 5, Chap. 22, 1911 (Dominion).
Section 131 of "The Ontario Railway Act."

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Sections 7 and 9, Chap. 193, R.S.O.
Amended 1914, Chap. 21, Sec. 42.
Amended 1915, Chap. 35, Sec. 4.

MORTGAGES OF RAILWAYS TO BE DEPOSITED WITH BOARD.
Subsection 4 of Section 48 of "The Ontario Railway Act."

NATURAL GAS.
See Chapter 12, Ontario Statutes, 1918.
And Section 10, Chapter 13, Ontario Statutes, 1919.

ONTARIO, RAILWAY ACT, THE
Chapter 185 of the Revised Statutes of Ontario, 1914.
Amended 1916, Chap. 31, Sec. 10
Amended 1917, Chap. 39.
Amended 1918, Chap. 20, Sec. 25.
Amended 1918, Chap. 30.
Amended 1919, Chap. 44.
Amended 1920, Chap. 56.

ONTARIO RAILWAY AND MUNICIPAL BOARD ACT, THE
Chapter 186 of The Revised Statutes of Ontario, 1914.
Amended 1915, Chap. 31.
Amended 1916, Chap. 24, Secs. 25 and 26.
See Sections 10, 12 and 13, Chap. 14, Ontario Statutes, 1917.
Amended 1919, Chap. 25, Sec. 25.

PARKS, SETTING ASIDE PART OF, FOR SPORTS, ETC.
Section 13 (6) of "The Public Parks Act" (Chap. 203, R.S.O., 1914).

PLANS OF CITY AND SUBURBAN LANDS
Chapter 38, Ontario Statutes, 1918.
Amended 1919, Chap. 53.
Amended 1920, Chap. 60 (See Section 13, Chap. 120, Ontario Statutes, 1920).

PUBLIC HEALTH ACT.
See Section 10, Chapter 41, Ontario Statutes, 1918, re Sewage Disposal Plants.

PUBLIC UTILITIES ACT, THE
Chapter 204, R.S.O., 1914.
Amended 1914, Chap. 35.
Amended 1917, Chap. 14, Sec. 13.
Amended 1917, Chap. 47.
Amended 1920, Chap. 71, Chap. 73.

PUBLIC WORKS OF ONTARIO, AN ACT RESPECTING.
Chapter 35, R.S.O., 1914, Sections 29, et seq., and Section 46.

TAXATION OF MINES AND NATURAL GAS, ACT RESPECTING
Chap. 26, R.S.O., 1914, Sec. 12 (3), et seq.

TELEPHONE SYSTEMS
Ontario Statutes, 1918, Chap. 31.
Amended 1919, Chap. 43.

TEMISKAMING AND NORTHERN ONTARIO RAILWAY ACT, ACT RESPECTING
Section 17, Chapter 38, R.S.O., 1914.

TOWNSHIP, SEPARATION OF JUNIOR, FROM UNION
Section 30 of "The Municipal Act."

(NOTE.—The above list is prepared to facilitate reference to legislation, and does not purport to be exhaustive. It refers to Public General Acts only, and does not include Special or Private Acts, a great many of which refer matters of local importance to the Board for adjudication, etc.)

TARIFF OF FEES

TARIFF OF FEES PAYABLE IN CASH UNDER SECTION 62 OF "THE ONTARIO RAILWAY AND MUNICIPAL BOARD ACT."

For copy of any Document, 10 cents for each 100 words and 50 cents for each Certificate.

For copy of any map or plan, applicants are to pay draughtsmen's and engineer's fees for same and 50 cents for each Certificate.

LAW STAMPS (Section 63)

In contentious matters requiring a Hearing there shall be paid in Law Stamps the sum of $15.00 for each day or fraction thereof over one-half day, and the sum of $10.00 for each half day or less occupied by or in connection with the Hearing, and $1.00 on each original subpoena.

IN CASES IN WHICH THERE IS NO OPPOSING PARTY

On order, under Section 295 of "The Municipal Act" validating a By-law and Debentures the following sums shall be paid in Law Stamps:

	Law Stamps
Where the issue of Debentures amounts to $10,000 or less	$15 00
Over $10,000 and up to $15,000	20 00
" $15,000 " $20,000	25 00
" $20,000 " $25,000	30 00
" $25,000 " $30,000	35 00
" $30,000 " $40,000	40 00
" $40,000 " $50,000	45 00
" $50,000 " $60,000	50 00
" $60,000 " $70,000	55 00
" $70,000 " $80,000	60 00
" $80,000 " $90,000	65 00
" $90,000 " $100,000	70 00
" $100,000 " $110,000	75 00
" $110,000 " $120,000	80 00
" $120,000 " $130,000	85 00
" $130,000 " $140,000	90 00
" $140,000 " $150,000	95 00
" $150,000 " $160,000	100 00
" $160,000 " $170,000	105 00
" $170,000 " $180,000	110 00
" $180,000 " $190,000	115 00
" $190,000 " $200,000	120 00
" $200,000 such sum as the Board may order or direct.	

The following sums shall be paid in Law Stamps on the following Orders:

On Order for approval of By-law for Work ordered by Dominion or Ontario Railway Board. Mun. Act, Sec. 289 (2) (f)	$10 00
On Order for approval of By-law for extension of Waterworks or Electric Light or Gasworks, etc. Mun. Act, Sec. 400 (3)	10 00
On Order for approval of Sinking Fund Investment By-law. Mun. Act, Sec. 303	5 00
On Order for approval of Extension of Debenture Issue Period. Mun. Act, Sec. 288 (9) and (10)	5 00
On Order for approval of By-law increasing the rate of interest on debentures. Mun. Act, Sec. 291	5 00
On Order for approval of Bridge Construction By-law. Mun. Act, Sec. 289 (2) (e)	5 00
On Order extending the time to pass a By-law. 4 Geo. V, Chap. 33, Sec. 7	5 00
On Order approving Municipal Fuel By-law. 7 Geo. V, Chap. 42, Sec. 12 (2)	5 00
On Order approving Railway Company's Public By-laws and Rules	2 00
On Order approving Railway Company's Tolls and Tariffs	2 00

On Order approving Railway Fenders. Sec. 253 of "The Ontario Railway Act"	5 00
On Order approving Railway Company's Examiner of Motormen	1 00
On approval of a Plan under "The Planning and Development Act." (8 Geo. V, Chap. 38)	5 00
On approval of a Deed, etc., under "The Planning and Development Act"	2 00
On approval of a Plan under "The Ontario Railway Act'	5 00

On Orders not included in the above list, such sums as the Board may order or direct.

TARIFF OF FEES PAYABLE IN LAW STAMPS UNDER "THE ONTARIO TELEPHONE ACT, 1918."

ON ORDER

Approving Connecting Agreement with The Bell Telephone Company of Canada, Limited; under Section 82	$5 00
Approving Connecting Agreement between telephone systems within the jurisdiction of Ontario; under Section 82	2 00
Approving Municipal By-law granting the use of higheays; under Section 67	1 00
Approving Municipal By-law providing for the establishment or extension of telephone systems; under Section 13	5 00
Granting the use of highways in unorganized townships; under Section 71	2 00
Authorizing the extension of telephone system established pursuant to Section 13, into unorganized townships; under Section 12	5 00
Extending the period within which debenture By-law to cover the cost of establishing telephone systems pursuant to Section 13, may be passed under Section 19	5 00
Authorizing the passing of By-law extending the period for repayment of debentures to cover the cost of telephone system established pursuant to Section 13, beyond 10 years; under Section 20	10 00
Authorizing the passing of By-law providing for the issue of new debentures to provide for the payment of a portion of the principal of the original debentures falling due in any year; under Section 23	5 00
Authorizing the removal of signatures from a peitition praying for the establishment of a telephone system pursuant to Section 13; under Section 7	2 00
Authorizing a company to issue additional stock or bonds; under Section 94	5 00
Authorizing a company to expend a portion of its Depreciation Reserve in new construction, etc.; under Section 93	5 00
Approving regulations to prevent the misuse of system by subscribers; under Section 95	2 00

On any Order not included in the above list such sums as the Board may order or direct

The above fees to apply only in cases not requiring a Hearing.

In contentious matters requiring a Hearing; $15 for each day or fraction thereof over one-half day, and $10 for each half-day or less occupied in connection with the Hearing.

Where enquiry is made by the Board's Expert $10 for each day or fraction thereof over one-half day, and $5 for each half-day or less occupied in connection with such enquiry.

STATEMENT IN DETAIL OF TRAVELLING EXPENSES AND DISBURSEMENTS

1920		
January	D. M. McIntyre, K.C., Chairman	$18 10
	A. B. Ingram, Vice-Chairman	19 85
	J. A. Ellis, Commissioner	21 55
	H. C. Small, Secretary	21 90
	F. Dagger, Electrical and Telephone Expert	29 45
	W. C. Coo, Court Reporter	21 95
	E. A. Crosland, Street Railway Inspector	9 40
February	D. M. McIntyre, K.C., Chairman	25 80
	A. B. Ingram, Vice-Chairman	12 60
	H. C. Small, Secretary	14 35
	F. Dagger, Electrical and Telephone Expert	81 65

	W. C. Coo, Court Reporter	57 61
March	D. M. McIntyre, K.C., Chairman	55 95
	A. B. Ingram, Vice-Chairman	41 75
	J. A. Ellis, Commissioner	34 60
	F. Dagger, Electrical and Telephone Expert	74 25
	W. C. Coo, Court Reporter	72 90
	E. A. Crosland, Street Railway Inspector	13 35
April	D. M. McIntyre, K.C., Chairman	21 10
	A. B. Ingram, Vice-Chairman	33 25
	J. A. Ellis, Commissioner	13 35
	W. C. Coo, Reporter	104 90
	F. Dagger, Electrical and Telephone Expert	146 35
	H. W. Middlemist, C.E., Board's Consulting Engineer	12 05
May	D. M. McIntyre, K.C., Chairman	55 21
	A. B. Ingram, Vice-Chairman	9 97
	J. A. Ellis, Commissioner	55 17
	F. Dagger, Electrical and Telephone Expert	13 30
	W. C. Coo, Court Reporter	74 70
	E. Crosland, Street Railway Inspector	9 25
	H. W. Middlemist, C.E., Board's Consulting Enginere	8 96
June	D. M. McIntyre, K.C., Chairman	35 40
	J. A. Ellis, Commissioner	39 87
	F. Dagger, Electrical and Telephone Expert	159 60
	W. C. Coo, Court Reporter	22 40
	E. A. Crosland, Street Railway Inspector	9 15
July	D. M. McIntyre, K.C., Chairman	14 35
	J. A. Ellis, Commissioner	9 00
	F. Dagger, Electrical and Telephone Expert	65 20
	E. A. Crosland, Street Railway Inspector	12 75
August	A. B. Ingram, Vice-Chairman	3 75
	J. A. Ellis, Commissioner	11 45
	F. Dagger, Electrical and Telephone Expert	39 55
	E. A. Crosland, Street Railway Inspector	9 50
	H. W. Middlemist, C.E., Board's Consulting Engineer, $23.20 and $11.20	34 40
September	D. M. McIntyre, K.C., Chairman	7 75
	A. B. Ingram, Vice-Chairman	9 80
	J. A. Ellis, Commissioner	13 75
	H. C. Small, Secretary	6 70
	F. Dagger, Electrical and Telephone Expert	3 00
	W. C. Coo, Court Reporter	3 50
October	D. M. McIntyre, K.C., Chairman	29 09
	A. B. Ingram, Vice-Chairman	45 00
	J. A. Ellis, Commissioner	44 47
	H. C. Small, Secretary	24 37
	F. Dagger, Electrical and Telephone Expert	89 20
	W. C. Coo, Court Reporter	70 67
	E. A. Crosland, Street Railway Inspector	24 05
November	D. M. McIntyre, K.C., Chairman	25 85
	A. B. Ingram, Vice-Chairman	84 28
	J. A. Ellis, Commissioner	39 86
	F. Dagger, Electrical and Telephone Expert	85 70
	W. C. Coo, Court Reporter	26 55
December	D. M. McIntyre, K.C., Chairman	9 50
	A. B. Ingram, Vice-President	20 90
	J. A. Ellis, Commissioner	14 20
	F. Dagger, Electrical and Telephone Expert	45 20
	W. C. Coo, Court Reporter	65 55
	E. Crosland, Street Railway Inspector	18 50
		$2,458 .3

THE FOLLOWING GIVES A BRIEF SUMMARY OF THE EXTENSIONS AND IMPROVEMENTS MADE TO THE RAILWAYS UNDER PROVINCIAL JURISDICTION DURING THE YEAR 1920

CORNWALL STREET RAILWAY, LIGHT AND POWER COMPANY, LIMITED

During the year ending November 30th, 1920, this Company did not make any track extensions.

They also report that during the same period they did not make any expenditure on track improvements, overhead structure, rolling stock, buildings, machinery, etc.

FORT WILLIAM ELECTRIC RAILWAY.

This Company reports that during the year November 30th, 1919, to November 30th, 1920, they extended their tracks 3,500 feet, at a cost of $8,327.70.

They also report an expenditure of $8,327 on track improvements, overhead structure rolling stock, buildings, machinery, etc., during the same period.

GUELPH RADIAL RAILWAY COMPANY

During the year ending November 30th, 1920, this Company report that they did not make any extensions to track.

They also report an expenditure on track improvements, overhead structure, rolling stock, buildings, machinery, extensions, of $30,045.86.

THE HAMILTON STREET RAILWAY COMPANY

This Company report that during the year ending 30th November, 1920, they extended their tracks 8,150 feet, at a cost of $25,383.32; the work not yet completed.

They also report an expenditure on track improvements, overhead structure, rolling stock, buildings, machinery, etc., of $28,277.79.

THE HAMILTON AND DUNDAS STREET RAILWAY COMPANY

During the year November 30th, 1919, to November 30th, 1920, this Company did not make any track extensions.

They also report an expenditure on track improvements, overhead structure, rolling stock, buildings, machinery, etc., of $2,000.00.

THE HAMILTON, GRIMSBY AND BEAMSVILLE RAILWAY COMPANY, LTD.

It is reported by this Company that during the year ending November 30th, 1920, they did not make any track extensions.

They also report an expenditure on track improvements, overhead structure, rolling stock, buildings, machinery, etc., of $4,886.40.

THE HAMILTON AND BARTON INCLINE RAILWAY COMPANY

They report that during the year November 30th, 1920, they did not make any extensions to track, and that no expenditure was made on track improvements, overhead structure, rolling stock, etc., other than for ordinary repairs.

THE HAMILTON MOUNTAIN PARK COMPANY, LIMITED—(INCLINE RAILWAY)

This Company report that for the year ending 30th November, 1920, they did not make any extensions to track, and they also report that during the same period they did not make any improvements to track, or additions to rolling stock, buildings, machinery, etc.

THE HUNTSVILLE AND LAKE OF BAYS RAILWAY COMPANY

During the year November 30th, 1919, to November 30th, 1920, this Company did not make any extensions to track.

They report an expenditure on track improvements, overhead structure, rolling stock, buildings, machinery, etc., for the year ending 30th November, 1920, of $2,074.50.

HYDRO ELECTRIC RADIAL RAILWAY—(ESSEX DIVISION)

It is reported by the Hydro-Electric Commission of Ontario that during the year November 30th, 1919, to November 30th, 1920, the tracks of this railway were extended one mile, which is not completed, at a cost of $65,000.

It is also reported that during the same period there was an expenditure on track improvements, overhead structure, rolling stock, buildings, machinery, etc., of $200,000.

THE INTERNATIONAL RAILWAY COMPANY—(NIAGARA FALLS PARK AND RIVER DIVISION)

This Company report that during the year ending November 30th, 1920, they did not make any extensions to track, and there was no expenditure on track improvements, overhead structure, rolling stock, buildings, machinery, etc.

THE INTERNATIONAL TRANSIT COMPANY

During the year ending November 30th, 1920, this Company report that they did not make any extensions to track, and there was no expenditure on track improvements, new buildings, machinery, etc.

KINGSTON, PORTSMOUTH AND CATARAQUI ELECTRIC RAILWAY COMPANY

This Company report that during the year November 30th, 1919, to November 30th, 1920, there were not any extensions made to track, and no expenditure on track improvements, machinery, buildings, etc., except for repairs only.

KITCHENER AND WATERLOO STREET RAILWAY

This Company report that during the year ending November 30th, 1920, under the head of track extensions, they purchased 4,850 feet from the Grand River Railway, for $5,000.00.

They also report during the same period an expenditure on Buildings, $17.18; Equipment (Cars) $2,361.92; Line $3,139.15; Track $7,256.49; a total of $12,774.74.

LAKE HURON AND NORTHERN ONTARIO RAILWAY

During the year ending November 30th, 1920, this Company report that there were not any extensions made to track. They also report that they did not make any expenditure on track improvements, rolling stock, buildings, machinery, etc.

THE LONDON STREET RAILWAY COMPANY

This Company report that during the year ending November 30th, 1920, there were not any extensions made to track, and no expenditure made on track improvements, overhead structure, rolling stock, buildings, etc., during the same period.

THE MIDLAND, SIMCOE AND TERMINAL RAILWAY

This railway was taken over by the Midland Iron and Steel Company, and is just used for piling iron on Midland Iron and Steel property. During the year ending November 30th, 1920, there was of course no extension made to tracks, and no expenditure on track improvements, machinery, etc.

MOUNT MCKAY AND KAKABEKA FALLS RAILWAY COMPANY

During the year ending November 30th, 1920, this Company report that they did not make any extensions to track.

They also report that during the same period they did not make any improvements to track, or any expenditure on overhead structure, rolling stock, buildings, machinery, etc.

PETERBORO RADIAL RAILWAY

The Commission operating this Railway report that during the year ending November 30th, 1920, they did not make any extensions to track.

They also report that during the same period they expended on track improvements, overhead structure, rolling stock, buildings, machinery, etc., $22,531.35.

PORT ARTHUR CIVIC RAILWAY

During the year ending November 30th, 1920, this Company report that they did not make any extensions to track.

They report, however, an expenditure on track improvements, overhead structure, machinery, rolling stock, buildings, etc., during the same period, of $148,952.52.

ST. THOMAS MUNICIPAL STREET RAILWAY

This Company report that during the year November 30th, 1919, to November 30th, 1920, they did not make any extensions to track.

They also report a total expenditure on track improvements, overhead structure, rolling stock, buildings, machinery, etc., of $45,000.00.

SARNIA STREET RAILWAY COMPANY, LIMITED

During the year November 30th, 1920, this Company did not make any extensions to track.

They report, however, a total expenditure on track improvements, rolling stock, buildings, machinery, etc., of $6,531.68.

SUDBURY, COPPER CLIFF SUBURBAN ELECTRIC RAILWAY

This Company report that during the year ending November 30th, 1920, they did not make any extensions to track.

They also report a total expenditure on track improvements, overhead structure, rolling stock, buildings, machinery, etc., of $13,537.94.

TEMISKAMING AND NORTHERN ONTARIO RAILWAY

This Company report that during the year ending November 30th, 1920, they did not make any track extensions.

They report, however, an expenditure during the same period on track improvements, overhead structure, rolling stock, buildings, machinery, etc., of $505,039.90.

THE THURLOW RAILWAY COMPANY

It is reported that during the year ending November 30th, 1920, this Company did not make any extensions to track.

They also report a total expenditure on track improvements, rolling stock, buildings, machinery, etc., during the same period, of $13,147.81.

THE TORONTO RAILWAY COMPANY

This Company report that during the twelve months of 1920 they did not make any extensions to track.

They report a total expenditure on track improvements, rolling stock, buildings, machinery, etc., of $180,000, approximately, during the same period.

THE TORONTO CIVIC RAILWAY

During the year ending November 30th, 1920, it is reported by the Commissioner of Works for the City of Toronto that this railway made extensions to tracks of .719 miles, at a cost of $41,867.30.

They also report a total expenditure on track improvements, overhead structure, rolling stock, buildings, machinery, etc., of $307,046.29.

THE TORONTO AND YORK RADIAL RAILWAY

This Company report that during the year ending November 30th, 1920, they did not make any extensions to track.

They also report that during the same period they expended on track improvements, overhead structure, rolling stock, buildings, machinery, etc., a total of $35,963.91.

THE WATERLOO-WELLINGTON RAILWAY COMPANY

During the year ending November 30th, 1920, this Company report that they did not make any extensions to track. They also report that they did not make any expenditure on track improvements, rolling stock, buildings, machinery, etc.

ELECTRIC, STEAM AND INCLINE RAILWAYS UNDER PROVINCIAL JURISDICTION, YEAR ENDING 31ST DECEMBER, 1920

No.	Name of Railway	Length of road first main track	Length of road second main track	Total main track	Length of sidings and turnouts	Total computed as single track	Length under construction	No. Power Houses		Remarks
								Steam	Water	
1	Cornwall Street Railway, Light and Power Co., Ltd.	4.		4.	2.5	6.5			1.	
2	Fort William (Municipal)	4.53	4.46	8.99	.26	19.95	1.66			Pur. Power from Kam. Power Co.
3	Guelph Radial (Municipal)	8.80		8.80	1.	9.80				Pur. Power from Hyd.-Elec., Ont.
4	Hamilton Street	17.4	16.3	33.7		33.7	1.60			Pur. Power from Hamilton Cataract Power, Light and Traction Co., Ltd., and Sub Stn. at Stoney Creek and Grimsby
5	Hamilton and Dundas	5.85	.20	6.5	1.60	7.65				
6	Hamilton, Grimsby and Beamsville Electric	22.6		22.6	3.6	26.2				
**7	Hyd.-Elec.Radial—Essex Div'sn	35.13	7.96	43.09	3.22	46.31	1.	1.		Pur. Canada Salt Co., and Hydro-Electric Commission, Ont.
*8	Hamilton and Barton (Incline)	.11		.12		.23		1.		
9	Hamilton and Mountain Park Co., Ltd. (Incline)	.13		.13		.26			1.	Purchase Electric Power House Hydro Electric
*10	Huntsville and Lake of Bays	1.45		1.45	.31	1.76				
11	International N.F.P.& River Div	1.914	11.202	23.116	1.359	24.475			1.	
12	International Transit	4.30	1.172	5.472	.38	5.852				From Great Lakes Power Co., Ltd [Sault Ste. Marie.
13	Kingston, Portsmouth and Cataraqui Electric	6.	2.	8.	.13	8.13				From City of Kingston.
14	Kitchener and Waterloo Street	4.19	1.40	5.59	.38	5.97				Power from Hydro Commission.
*15	Lake Huron & Northern Ontario	15.		15.	2.	17.				
16	London Street	27.48	7.64	35.12	.98	36.10				Power from Hydro-Electric.
*17	Midland Simcoe	5.		5.	1.5	6.5				
*18	Mount McKay & Kakabeka Falls	5.		5.	1.5	6.5				
†19	Peterborough Radial	7.64		7.64	.79	8.43				Power from Hydro-Electric, Ont.
20	Port Arthur (Municipal)	12.43	6.10	18.53	1.04	19.57		1.		Power from Hydro-Electric, Ont.
21	Sarnia Street Railway Co., Ltd.	8.25	.75	9.	.25	9.25				Pow. from Sarnia Hyd.-Elec.Syst.
22	St. Thomas Street (Municipal)	7.5		7.5	.13	7.63				Pow. from Hyd.-Electric, Ontario
23	Sudbury-Copper Cliff Sub. Elec.	7.9		7.9	.13	8.03				Power from Wahnapitae Power Co., Ltd.
*24	Temiskaming & Northern Ont.	328.50	1.70	330.20	20.84	451.04				
*25	Thurlow Railway	2.671		2.671	2.766	5.437				
26	Toronto Street	61.7745	59.4385	121.2130	8.288	129.501			1.	Power from Toronto Power. Co.
27	Toronto Civic (Municipal)	10.260	10.260	20.520	1.831	22.351				Pow. from Tor. Hydro-Elec. Com.
28	Toronto and York Radial Rly.	72.17		72.17	9.83	82.			6	Power from Toronto Ry. Co. and Toronto Power Co.
29	Waterloo-Wellington Rly.	2.8		2.8	.2	3.				Pow. from Kitchener Light Comsrs
	Total	690.7795	130.5825	831.8220	66.814	1009.126	4.26	3	10.	

*Steam Railways. †Operated by Hydro-Electric Commission of Ontario. **Operated by Hydro-Electric Radial Commission of Ontario.
†*Operated by T. & N. O. Commission.

FORM THAT MAY BE USED IN CONNECTION WITH THE EXAMINATION OF MOTORMEN

Name of City or Town.

.................................192 .

NAME OF RAILWAY.

This is to certify, that acting under the Ontario Railway Act, 1914, R.S.O., chapter 185, section 263, I have fully examined the....................who is.................years of age and........feet........inches high, weighs...................................lbs., complexion......................, as to his fitness as a motorman, that the said.......... ....is of steady habits, and is in physical ability, intelligence and general knowledge of, and experience in, this work qualified to act as motorman on any electric motor car of said Company.

I have been duly appointed an examiner under the said Act, my appointment being dated ....

Name..................................
Examiner.

FORM

COPY OF FORM TO BE USED BY COMPANIES IN REPORTING ACCIDENTS

ACCIDENTS: Regulations Under and in Pursuance of Sections 274 and 279 of "The Ontario Railway Act, 1914." R.S.O., Chapter 185.

ACCIDENTS.—Every company upon the happening of an accident shall give to the Ontario Railway and Municipal Board notice thereof in writing by delivering the same at the office of the Board in the City of Toronto or by mailing it, postage prepaid, in a registered letter addressed to the Board.

Such notice shall contain a statement signed by a duly authorized officer of such company, setting forth the information and particulars hereinafter mentioned.

Such statement shall be divided into paragraphs each of which shall include and refer to one (or one group) only of the numbered particulars hereinafter mentioned, and the paragraph referring to each respective numbered particular shall bear the number corresponding to the number hereinafter given for each such particular.

The numbers of paragraphs and the particulars to which each shall refer as aforesaid, are as follows:—

1. Name or names of company or companies concerned in accident.
2. Numbers of train, engine, car or motor.
3. Date and time of accident.
4. Nature of accident.
5. Exact location.
6. Name in full, address and legal addition of each person injured or killed.
7. Age.
8. Married or single.
9. Passenger, employee or other.
10. If employee, length and nature of service with dates and periods of different occupations (if more than one).
11. If employee, character, experience, skill and fitness with respect to occupation at time of accident.
12. How engaged at time of accident, and how long on duty.

13. Cause of accident, how same occurred, with full particulars and details, and diagram if required.
14. Persons in charge, with full names, addresses and the particulars referred to in paragraphs 10, 11 and 12.
15. Result to person and particulars of injury.
16. Result to property, including amount of damage.
17. Names and addresses of all persons present at, or eye-witnesses of, the accident.
18. What investigation (if any), and result of same.
19. Verdict (if any).

The Board reserves the right to require such further and other details, particulars, maps plans, profiles, documents, models and information or illustration of any kind as the nature of the accident and a full understanding thereof may suggest or require.

In pursuance of sections 274 and 279 of said Act, the Board declares that all such information so given in pursuance of this regulation shall be privileged.

Signature of Officer.

N.B.—Give name of officer who fills out this report.

REGULATION AS TO HEIGHT OF CAR STEPS

Under and in pursuance of a certain order of the Board bearing date the 2nd day of June A.D. 1909, The Ontario Railway and Municipal Board made the following regulations:

The steps on all cars hereafter constructed and used by the Toronto Railway Company and all other street and electric railways under the jurisdiction of this Board shall have steps conforming to the following regulations:

On closed single truck cars the height of the first step above the ground shall not be less than twelve nor more than fifteen inches.

On closed double truck cars the height of the first step above the ground shall not be less than fourteen nor more than sixteen inches.

On open single truck cars the height of the first step above the ground shall be not less than twelve nor more than fifteen inches, and the distance between the first and second steps and the second step and the floor of the car shall measure twelve inches and nine inches respectively.

On open double truck cars the height of the first step above the ground shall be not less than fourteen nor more than sixteen inches, and the distance between the first and second steps and the second step and the floor of the car shall measure twelve inches and fourteen inches respectively.

REGULATION RE DRINKING WATER ON PASSENGER CARS

Every Electric Railway Company in Ontario, subject to the jurisdiction of the Board, shall provide in each passenger car which runs 20 miles or more, a suitable receptacle for water with a cup or drinking utensil attached upon or near such receptacle, and shall keep such receptacle, while the car is in use, constantly supplied with cool drinking water for the use of passengers and the conductor and motorman in charge of such car.

This regulation shall not apply to street railways in towns or cities.

Dated at Toronto this 24th day of June, 1909.

(Sgd.) JAMES LEITCH,
Chairman.

(Sgd.) A. B. INGRAM,
Vice-Chairman.

(Sgd.) H. N. KITTSON,
Commissioner.

TORONTO—1920

Summary by months of all Accidents occurring on Street Railway lines within Toronto City limits under the jurisdiction of this Board.

January 1st to December 31st, 1920.

Nature of Accident	January	February	March	April	May	June	July	August	September	October	November	December	Total
Collisions with cars	3	3	Nil	4	1	4	1	1	1	3	3	2	26
Collisions with autos	244	186	220	209	281	208	190	199	225	208	209	176	2555
Collisions with motor cycles and bicycles	3	1	6	6	22	12	6	12	7	7	6	2	90
Collisions with wagons	35	41	56	23	34	19	20	23	21	21	21	22	336
Boarding cars	30	22	26	9	32	19	14	21	19	18	32	20	262
Alighting from cars	30	21	47	56	60	44	53	62	45	43	79	77	617
Derailment of cars	1	1	Nil	3	Nil	Nil	Nil	Nil	Nil	Nil	1	Nil	6
Miscellaneous	42	37	39	42	40	31	30	23	20	16	40	26	386
Total (all accidents)	388	312	394	352	470	337	314	341	338	316	391	325	4,278
Personal injuries, all degrees:													
To passengers	48	26	39	46	48	37	34	33	25	29	49	40	454
To others	12	9	16	12	23	8	11	14	12	7	15	6	145
Total	60	35	55	58	71	45	45	47	37	36	64	46	599
Fatal Accidents:													
To passengers	Nil	Nil	Nil	1	Nil	Nil	Nil	Nil	Nil	Nil	1	Nil	2
To others	2	1	Nil	1	Nil	1	1	Nil	Nil	1	2	Nil	9
Total	2	1	Nil	2	Nil	1	1	Nil	Nil	1	3	Nil	11

HAMILTON—1920

Accidents on Hamilton Street Railway, Hamilton and Dundas Street Railway, and Hamilton Grimsby, and Beamsville Electric Railway lines within Hamilton City limits, and under the jurisdiction of this Board.

January 1st to December 31st, 1920

Nature of Accident	January	February	March	April	May	June	July	August	September	October	November	December	Total
Collisions with cars	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Collisions with autos	5	19	29	31	39	47	43	36	54	31	39	29	402
Collisions with motor cycles and bicycles	Nil	Nil	Nil	Nil	1	1	Nil	Nil	Nil	Nil	Nil	1	3
Collisions with wagons	Nil	6	7	3	1	1	5	4	3	2	4	3	39
Boarding cars	2	5	1	2	1	2	4	2	2	1	Nil	2	24
Alighting from cars	2	3	3	2	1	7	2	9	4	1	3	3	40
Derailment of cars	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Miscellaneous	5	4	3	3	3	4	6	3	6	4	1	Nil	42
Total (all accidents)	14	37	43	41	46	62	60	54	69	39	47	38	550
Personal injuries, all degrees:													
To passengers	6	9	4	3	5	12	8	13	3	2	3	5	73
To others	2	Nil	3	3	Nil	2	5	Nil	6	4	1	Nil	26
Total	8	9	7	6	5	14	13	13	9	6	4	5	99
Fatal Accidents:													
To passengers	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
To others	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	2	Nil	Nil	Nil	3
Total	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	2	Nil	Nil	Nil	3

LONDON—1920

Accidents on London Street Railway only.

Nature of Accident	January	February	March	April	May	June	July	August	September	October	November	December	Total
Collisions with cars	1	2	2	1	Nil	1	2	1	1	1	Nil	2	14
Collisions with autos	19	18	24	7	23	13	23	21	25	15	38	17	243
Collisions with motor cycles and bicycles	1	Nil	Nil	Nil	1	Nil	2	Nil	Nil	Nil	Nil	Nil	4
Collisions with wagons	4	3	5	1	3	2	6	1	4	5	9	1	44
Boarding cars	Nil	Nil	2	1	1	1	Nil	Nil	Nil	Nil	Nil	2	7
Alighting from cars	6	4	3	2	5	3	2	2	3	1	2	1	34
Derailment of cars	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Miscellaneous	3	3	5	2	7	2	6	1	10	6	6	1	52
Total (all accidents)	34	30	41	14	40	22	41	26	43	28	55	24	398
Personal injuries, all degrees:													
To passengers	Nil	Nil	3	1	4	1	3	Nil	2	1	3	5	23
To others	3	2	3	Nil	2	2	4	1	7	3	2	1	30
Total	3	2	6	1	6	3	7	1	9	4	5	6	53
Fatal accidents:													
To passengers	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
To others	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Total	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

INDEX TO RAILWAY LEGISLATION

List No. 2

The following Index has been made with the object of continuing in chronological order all the legislation passed by both Dominion and Provincial Governments since 1867, affecting railways situated wholly or partially within the Province of Ontario.

"List No. 2" was commenced on page 272 of our Ninth Annual Report (1914), and is continued in the following list up to and inclusive of 1920:

	Cap.	Year
Algoma Central and Hudson Bay Railway Company:		
Dominion Statute Act respecting.	32	1916
Belleville-Prince Edward Bridge Company:		
Dominion Statute Act to incorporate.	95	1899
Dominion Statute Act respecting.	85	1908
Dominion Statute Act respecting.	60	1918
Brantford, City of:		
Ontario Statute Act respecting.	112	1920
Bruce Mines and Algoma Railway Company:		
Ontario Statute Act respecting. (See Lake Huron and Northern Ontario Railway Co.)	25	1919
Brunner, Mond, Canada, Limited:		
Incorporated by Letters Patent under R.S.C. 1906, Cap. 79.		
Ontario Statute Act respecting.	116	1919
Buffalo and Fort Erie Ferry and Railway Company:		
Ontario Statute Act to incorporate.	101	1916
Campbellford, Lake Ontario and Western Railway Co.:		
Ontario Statute (See Act respecting Town of Trenton).	93	1917
Canadian National Railway Company:		
Dominion Statute (See Canadian Northern Railways).	13	1919
Canadian Niagara Bridge Company:		
Dominion Statute Act to incorporate. (Declared to be a work for the general advantage of Canada).	62	1918
Dominion Statute Act respecting.	78	1919
Canadian Northern Railway Company:		
Dominion Statute An Act providing for capital stock by Government.	24	1917
Ontario Statute (See Act City of Port Arthur).	85	1917

	Cap.	Year
Canadian Northern Ontario Railway Company:		
Dominion Statute Act respecting.	37	1916
Ontario Statute (See Act Town of Trenton).	93	1917
Ontario Statute Act respecting.	53	1918
Canadian Northern Ontario Railway Company, Canadian Northern Railway Company and Canadian Pacific Railway Company:		
Dominion Statute Act to confirm certain agreements.	38	1916
Canadian Pacific Railway Company:		
Ontario Statute (See Act Port Arthur).	85	1917
Dominion Statute (See Act respecting Aircraft, etc.)	80	1919
Central Railway Company of Canada:		
Dominion Statute Act respecting.	82	1919
English Valley and Hudson Bay Railway CCompany:		
Dominion Statute Act to incorporate.	43	1917
Essex Terminal Railway Company:		
Ontario Statute Act respecting.	102	1916
Dominion Statute Act respecting.	51	1917
Dominion Statute Act respecting.	84	1919
Fort William Municipal Railway:		
Ontario Statute Section 71.	27	1917
Ontario Statute Act City of Fort William.	60	1918
Gananoque and Arnprior Railway Company:		
Ontario Statute Act to amend.	103	1916
Georgian Bay and Seaboard Railway Company:		
Ontario Statute (See Act to incorporate Port McNicoll).	86	1917
Grand River Railway Company:		
Dominion Statute Amended to remove Provincial Jurisdiction.	85	1919
Grand Trunk Railway System:		
Dominion Statute An Act respecting the acquisition by His Majesty of the Grand Trunk Railway System (Second Session, Vols. I and II). An Act to confirm the agreement dated the eighth day of March, 1920, between His Majesty the King and the Grand Trunk Railway Company of Canada for the acquisition by His Majesty of the capital stock of the said Grand Trunk Railway Company, except the four per cent. guaranteed stock.	17	1919
Dominion Statute Note.—See in Schedule to this Act the names of all the companies controlled by the Grand Trunk Railway; also companies controlled by subsidiary companies of the Grand Trunk.	13	1920

	Cap.	Year
GRAND TRUNK PACIFIC RAILWAY SYSTEM:		
Dominion Statute	22	1919
Act confirming Orders of Governor-General in Council.		
Dominion Statute	16	1919
An Act to amend an Act to confirm two Orders of the Governor-General in Council respecting the Grand Trunk Pacific Railway System (Second Session, Vols. I and II).		
GRAND VALLEY RAILWAY:		
Dominion Statute	42	1916
(See Act to enable Brantford to own railway).		
HAMILTON AND DUNDAS STREET RAILWAY COMPANY:		
Ontario Statute	63	1918
Act respecting City of Hamilton.		
INTERNATIONAL BRIDGE AND TUNNEL COMPANY:		
Dominion Statute	108	1905
Act to incorporate.		
Dominion Statute	63	1918
Act respecting.		
INTERPROVINCIAL AND JAMES BAY RAILWAY COMPANY:		
Dominion Statute	53	1917
Act respecting.		
KENORA AND ENGLISH RIVER RAILWAY COMPANY:		
Dominion Statute	44	1917
Act to incorporate.		
LAKE HURON AND NORTHERN ONTARIO RAILWAY COMPANY:		
Ontario Statute	25	1919
Section 41, s. s. (2) (3)—extension of time.		
LONDON STREET RAILWAY COMPANY:		
Ontario Statute	27	1917
(See Section 31 Statute Law Amendment Act).		
LONDON AND PORT STANLEY RAILWAY:		
Ontario Statute	75	1917
Act of City of London.		
Ontario Statute	65	1918
(See Act of City of London).		
Dominion Statute	89	1919
Act respecting increase in fares.		
LONDON AND SOUTH EASTERN RAILWAY COMPANY:		
Ontario Statute	96	1919
(See Act, City of London).		
MICHIGAN CENTRAL RAILWAY COMPANY:		
Ontario Statute	59	1918
Act respecting County of Essex.		
MORRISBURG AND OTTAWA ELECTRIC RAILWAY COMPANY:		
Ontario Statute	117	1919
Extension of time.		
MOUNT MCKAY AND KAKABEKA FALLS RAILWAY COMPANY:		
Ontario Statute	104	1916
Act respecting.		
Ontario Statute	151	1920
Act respecting—extension of time.		

	Cap.	Year
Niagara Falls Suspension Bridge Company:		
Ontario Statute	97	1919
See Act, City of Niagara Falls.		
Niagara, St. Catharines and Toronto Railway Company:		
Dominion Statute	46	1916
Act respecting.		
Nipissing Central Railway Company:		
Dominion Statute	56	1918
Act respecting.		
Northern Light Railway Company:		
Ontario Statute	152	1920
Act to incorporate.		
Ontario Niagara Connecting Bridge Company:		
Dominion Statute	31	1916
Act to incorporate. Declared to be a work for the general advantage of Canada.		
Ontario West Shore Railway Company:		
Ontario Statute	118	1919
Act respecting.		
Ontario Statute	153	1920
An Act to correct an error in an Act respecting.		
Ottawa, City of: Ottawa Electric Railway Co.		
Ontario Statute	132	1920
An Act to enable the Corporation to acquire, construct, extend and operate a local transportation system, and to provide for the management of the same.		
Ottawa and New York Railway Company:		
Ontario Statute	116	1920
An Act respecting the Railway and the Township of Cornwall.		
Ottawa, Northern and Western Railway Company:		
Dominion Statute	91	1919
Act respecting.		
Peterborough Radial Railway Company:		
Ontario Statute	83	1917
Act, City of Peterborough.		
Porcupine Rand Belt Electric Railway Co.:		
Ontario Statute	154	1920
Act respecting—extension of time.		
Port Arthur Municipal Railway:		
Ontario Statute	27	1917
Section 71, Statute Law Amendment Act.		
Simcoe Railway and Power Company:		
Ontario Statute	20	1917
See Schedule "B" Power Com. Act.		
Sudbury-Copper Cliff Suburban Electric Railway Company:		
Ontario Statute	94	1916
See Act, Town of Sudbury.		
Ontario Statute	119	1919
Act respecting.		

	Cap.	Year
TEMISKAMING AND NORTHERN ONTARIO RAILWAY:		
Ontario Statute	25	1919
Section 5, Salary Increase		
Ontario Statute	17	1920
An Act to provide for the extension of.		
TORONTO, CITY OF:		
Ontario Statute	144	1920
An Act respecting—to establish a Transportation Commission.		
TORONTO, HAMILTON AND BUFFALO RAILWAY:		
Dominion Statute	50	1916
Act respecting.		
Dominion Statute	58	1917
Dominion Statute	57	1918
Note.—Hamilton and Dundas Railway Agreement.		
TORONTO, NIAGARA AND WESTERN RAILWAY COMPANY:		
Dominion Statute	51	1916
Act respecting.		
Dominion Statute	58	1918
Act respecting.		
TORONTO RAILWAY COMPANY:		
Ontario Statute	92	1917
Act respecting City of Toronto, 200 cars; see Schedule "G"		
TORONTO, SUBURBAN RAILWAY COMPANY:		
Ontario Statute	92	1917
Act respecting City of Toronto.		
Ontario Statute	84	1918
Act respecting City of Toronto.		
Ontario Statute	110	1919
Section 3 and Schedule "D" (1). Act respecting City of Toronto.		
TORONTO AND YORK RADIAL COMPANY:		
Ontario Statute	92	1917
Act respecting City of Toronto.		
WATERLOO-WELLINGTON RAILWAY COMPANY:		
Ontario Statute	115	1919
(Formerly Berlin and Northern Railway—Name changed).		

TABLES A, B AND C

The following tables A, B and C have been compiled for the purpose of showing the various subsidies voted from July 1, 1867, by the Province of Ontario to Railways constructed wholly or partly within the Province.

Table A sets forth the subsidies voted by the Province of Ontario to the various Railways therein mentioned. These subsidies, however, have not all been paid in cash. In some cases the Railways have received the whole amount in cash, others have received the whole amount in certificates of the Province of Ontario, bearing interest at the rate of 3½ per cent. per annum while others have received payment partly in cash and partly in certificates of Ontario with interest at 3½ per cent.

Table B shows what cash the Railways have received, the amounts which the Province has paid in respect of the certificates, and the amount of outstanding certificates. The amounts set forth in the total column in Table B represent the amounts paid to Railway Companies respectively, together with the amount of the unredeemed certificates issued to such Railways. The difference between the gross sum of the subsidies voted and the total amount paid by the Government to Railways and the unpaid liability due by the Government in respect of such subsidies is made up of the interest at the rate of 3½ per cent. for the term of years over which the payment of the Government is distributed.

Table C is a statement showing amounts payable annually for certificates issued by the Treasurer of the Province for "Aid to Railways" and Annuities.

NOTE.—These following statements are taken from the Public Accounts for the year ending 31st October, 1920.

TABLE A

AID TO RAILWAYS FROM CONFEDERATION TO OCTOBER 31ST, 1920

Name of Railway	Miles	Rate	Subsidy Voted
Algoma Eastern	53.	$5,000 00	$265,000 00
Algoma Central & Hudson Bay Railway	99.81	2,000 00	199,620 00
Bay of Quinte	28.45	3,000 00	85,350 00
Belleville and North Hastings	22.	3,000 00	66,000 00
Brantford, Norfolk & Port Burwell	33.27	2,000 00	66,540 00
Bruce Mines & Algoma	17.	3,000 00	51,000 00
Canada Central	20.029	2,650 00	53,000 00
do	20.	2,650 00	53,000 00
do	7.531	2,650 00	19,957 15
Canada Southern	62.901	2,000 00	125,802 00
Central Counties	31.	2,000 00	62,000 00
do	7.	1,200 00	8,400 00
Central Ontario	50.500	3,000 00	151,500 00
Cobourg, Peterboro' & Marmora	9.37	2,000 00	18,740 00
Credit Valley	153.061	3,000 00	459,183 00
Canada Atlantic	65.72	4,000 00	262,880 00
Erie & Huron	40.556	2,000 00	81,112 00
Grand Trunk, Georgian Bay & Lake Erie	79.3	2,000 00	158,600 00
Grand Junction	45.86	3,000 00	137,580 00
do	20.	2,000 00	40,000 00
G.T.R. Assignee of Magnetawan River Railway	1.86	cash	10,000 00
Grand Trunk Pacific	188.16	2,000 00	376,320 00
Hamilton & North Western	95.464	2,500 00	238,660 00
do do	48.052	3,000 00	144,156 00
Hamilton & Lake Erie	33.48	2,000 00	66,960 00
Huntsville & Lake of Bays	1.50	cash	10,000 00
Irondale, Bancroft & Ottawa	44.77	3,000 00	134,310 00
James Bay	3.70	4,000 00	14,800 00
Kingston & Pembroke	20.	2,000 00	40,000 00
do	15.	2,650 00	39,750 00
do	11.58	3,250 00	37,635 00
do	13.74	7,000 00	96,180 00
do	28.42	8,000 00	237,360 00
Lake Simcoe Junction	26.50	2,000 00	53,000 00
Lindsay, Bobcaygeon & Pontypool	17.53	3,000 00	52,590 00
London, Huron & Bruce	69.146	2,000 00	138,292 00
Montreal and Ottawa	50.	2,000 00	100,000 00
Midland	20.40	2,000 00	40,800 00
do	19.60	2,250 00	44,100 00
do	14.53	4,000 00	58,120 00
North Simcoe	33.343	2,500 00	83,357 50
Northern Extension	42.72	2,000 00	85,440 00
do	27.68	4,000 00	110,720 00
Ontario & Rainy River	268.20	4,000 00	1,072,800 00
Ontario, Belmont & Northern	9.57	2,000 00	19,140 00
Ottawa, Arnprior & Parry Sound	149.43	3,000 00	448,290 00
Pembroke Southern	18.50	3,000 00	55,500 00
Prince Arthur's Landing	5.995	2,000 00	11,990 00
Prince Edward County	32.	2,500 00	80,000 00
Port Dover & Lake Huron	63.	2,000 00	126,000 00
Port Arthur, Duluth & Western	80.	3,000 00	240,000 00
Parry Sound Colonization	47.75	3,000 00	143,250 00
Stratford & Lake Huron	27.5	2,000 00	55,000 00
Toronto, Grey & Bruce	73.52	3,000 00	220,560 00
do	77.62	2,000 00	155,240 00
Toronto & Nipissing	33.439	2,000 00	66,878 00
do	12.778	3,000 00	38,334 00
Tillsonburg, Lake Erie & Pacific	19.108	2,000 00	38,216 00
Thessalon & Northern	1.929	cash	5,000 00
Victoria	33.442	4,000 00	133,768 00
do	22.310	8,000 00	178,480 00
Wellington, Grey & Bruce	120.638	2,000 00	241,276 00
Whitby, Port Perry & Lindsay	45.745	2,000 00	91,490 00
Ottawa & New York (International Bridge)		certificates	35,000 00
Dominion Bridge Co. (Interprovincial Bridge)		certificates	50,000 00
Totals	2,836.007		8,084,026 65

TABLE B

AID TO RAILWAYS UP TO 31ST OCTOBER, 1920, FROM CONFEDERATION

Name of Railway	Miles	Cash Payments	Certificates paid	Certificates outstanding	Total
		$ c.	$ c.	$ c.	$ c.
Algoma Eastern Railway	53.000	265,000 00			265,000 00
Algoma Central & Hudson's Bay Railway	99.810	199,620 00			199,620 00
Belleville and North Hastings	22.000		114,206 40		114,206 40
Brantford, Norfolk and Port Burwell	33.270		129,353 60		129,353 60
Bruce Mines and Algoma	17.000	1,920 00	41,529 15	50,036 45	93,485 60
Bay of Quinte	28.450		65,681 88	93,546 92	159,228 80
Canada Central	47.560	125,957 15			125,957 15
Canada Southern	62.901		244,559 20		244,559 20
Central Counties	38.000	68,747 26			68,747 26
Central Ontario	50.500	73,500 00	64,993 62	80,524 78	219,018 40
Cobourg, Peterboro' and Marmora	9.370	18,740 00			18,740 00
Credit Valley	153.061	18,702 00	788,648 85		807,350 85
Canada Atlantic	65.720		454,887 60		454,887 60
Erie and Huron	40.556	1,634 47	122,200 40		123,834 87
Grand Trunk, Georgian Bay and Lake Erie	79.300	1,580 00	229,866 00		231,446 00
Grand Junction	65.860	40,000 00	238,067 60		278,067 60
Grand Trunk Railway as Assignee of Magnetawan Railway	1.860	10,000 00			10,000 00
Grand Trunk Pacific	188.160		204,455 46	497,634 94	702,090 40
Hamilton and North Western	143.516		727,697 20		727,697 20
Hamilton and Lake Erie	33.480	66,960 00			66,960 00
Huntsville and Lake of Bays	1.500	10,000 00			10,000 00
Irondale, Bancroft and Ottawa	44.770		150,518 64	100,050 96	250,569 60
James Bay Railway	3.700		12,425 40	15,186 60	27,612 00
Kingston and Pembroke	88.740	213,522 50	393,423 20		606,945 70
Lindsay, Bobcaygeon and Pontypool	17.530		39,245 76	58,868 64	98,114 40
Lake Simcoe Junction Railway	26.500	53,000 00			53,000 00

TABLE B—(Continued)

London, Huron and Bruce	69.146		268,839 60		268,839 60
Montreal and Ottawa	50.000		105,406 40	81,153 60	186,560 00
Midland Railway	54.530	66,227 50	149,284 40		215,511 90
North Simcoe Railway	33.343		144,241 60		144,241 60
Northern Extension Railway	70.400	196,188 00			196,188 00
Ontario and Rainy River (Canadian Northern)	268.200		963,433 30	1,037,982 70	2,001,416 00
Ontario, Belmont and Northern	9.570		21,435 36	14,290 24	35,725 60
Ottawa, Arnprior and Parry Sound	149.430		510,996 88	306,695 12	817,692 00
Pembroke Southern	18.500		56,947 44	46,593 36	103,540 80
Prince Arthur's Landing	5.995		20,747 20		20,747 20
Prince Edward County	32.000		155,520 00		155,520 00
Port Dover and Lake Huron	63.000	126,000 00			126,000 00
Port Arthur, Duluth and Western (Can. Northern)	80.000	15,571 54	328,112 40	119,631 60	463,315 54
Parry Sound Colonization	47.750		179,080 11	88,167 09	267,247 20
Stratford and Lake Huron	27.500	55,000 00			55,000 00
Toronto, Grey and Bruce	151.140	285,182 00	176,182 40		461,364 40
Toronto and Nipissing	46.217	105,212 00			105,212 00
Tilsonburg, Lake Erie and Pacific	19.108		42,755 53	28,539 67	71,295 20
Thessalon and Northern	1.929	5,000 00			5,000 00
Victoria	55.752	33,442 00	503,875 20		537,317 20
Wellington, Grey and Bruce	120.638	241,276 00			241,276 00
Whitby, Port Perry and Lindsay	45.745	40,000 00	89,790 40		129,790 40
Ottawa and New York (International Bridge)			32,648 80	32,648 80	65,297 60
Dominion Bridge Co. (Interprovincial Bridge)			45,475 95	47,808 05	93,284 00
Totals	2,836.007	2,337,982 42	7,816,532 93	2,699,359 52	12,853,874 87

NOTE.—Present Value of Railway Certificates outstanding, October 31st, 1920, $1,939,168.39.

TABLE C

STATEMENT SHOWING AMOUNTS PAYABLE ANNUALLY FOR CERTIFICATES ISSUED BY THE TREASURER OF THE PROVINCE FOR "AID TO RAILWAYS" AND ANNUITIES

Year	Railway Aid Certificates	Annuities
	$ c.	$ c.
1920		51,450 00
1921	139,112 54	102,900 00
1922	139,112 54	102,900 00
1923	139,112 54	102,900 00
1924	139,112 54	96,200 00
1925	139,112 54	82,500 00
1926	139,112 54	69,350 00
1927	139,112 54	56,950 00
1928	139,112 54	50,700 00
1929	139,112 54	50,700 00
1930	138,412 94	50,700 00
1931	134,914 94	43,700 00
1932	127,918 94	32,700 00
1933	125,120 54	28,700 00
1934	123,021 74	28,700 00
1935	111,128 54	24,700 00
1936	105,090 01	16,700 00
1937	94,459 80	9,200 00
1938	90,961 80	2,850 00
1939	86,122 35	
1940	82,239 02	
1941	67,943 75	
1942	31,818 40	
1943	24,920 51	
1944	22,695 08	
1945	18,251 86	
1946	18,251 86	
1947	18,251 86	
1948	18,251 86	
1949	6,871 26	
1950	699 60	
Totals	2,699,359 52	1,004,500 00

NOTE.—Present value of Railway certificates, October 31st, 1920 (interest 1¾ per cent. half yearly)	$1,939,168 39
Present value of Annuities, October 31st, 1920 (interest 1¾ per cent. half yearly)	825,218 60

SYNOPSIS OF 1920 CAMPAIGN OF ONTARIO SAFETY LEAGUE

In 1920, the League carried on voluminous correspondence with manufacturers, motorists, street-car men and others, asking co-operation in prevention of accidents and fires.

Showed safety motion pictures and lantern slides to thousands of school children, workers in industry and the public generally.

Distributed bulletins and other safety literature in over 100 towns and cities in Ontario.

Placed safety signs in street-cars and elsewhere.

Issued a special "Letter to Parents" asking for their help in educating children.

Conducted Essay Competition in the Schools of Ontario.

Conducted Drawing Contest in the Schools of Ontario.

Held a Three-day Safety Convention in April, at which important papers were read and discussed by representatives of industry from Ontario, Quebec, Nova Scotia and Manitoba.

Conducted an intensive drive in October known as "Safety Week." This "Week" was observed in fifteen towns and cities in Ontario, and had a wonderful effect on the whole Province.

Distributed the Following Literature:

96,000	School Bulletins.
87,000	Letters to Parents.
128,000	Window Cards.
179,000	Industrial Bulletins.
42,000	Special Bulletins.
37,000	Traffic Bulletins.
14,800	News Letters.
36,000	Automobile Windshield Stickers.
240,000	Pay Envelope Slips.
1,800	Large Posters and Bill Boards.
27,900	Form Letters.
5,000	Safety Buttons.
24,000	Circulars.
29,500	Special Leaflets, Reports, etc., etc.
275,000	Gummed Seals.
15,000	Calendars.
$170.00	in Contest Prizes.

ONTARIO SAFETY LEAGUE
189 Church Street Toronto

ANNUAL REPORT OF THE

CORNWALL STREET RAILWAY, LIGHT AND POWER CO., LTD.

FOR THE YEAR ENDING JUNE 30TH, 1920

GENERAL INFORMATION

Name of Municipalities in which railway operates: Cornwall.
Name of Company: Cornwall Street Railway, Light and Power Co., Ltd.
Date of Incorporation: Letters Patent, April 18th, 1902.
Date of Expiry of Franchise: September 1st, 1934.
Total Taxes paid during year to Municipality: $1224.34.
Amount of Aid received from Municipality, if any: None.
Power consumed per car mile in kilowatt hours: No meter.
Average speed of cars: Passenger—9 miles; Freight—5 miles per hour.
State if power is purchased or generated by Company: Generated by Company.
State if power is generated by steam or water power: Water Plant.
Give number of power houses: Two—1 water, 1 steam.

GENERAL EXHIBIT FOR THE YEAR

Gross earnings from operation			$52,035 42
Operating expenses			37,090 59
Net Earnings from operation			14,944 83
Miscellaneous income:			
Parks, Boathouse, etc.		$805 96	
Gasoline and oil		381 36	
Total miscellaneous income			1,187 32
Gross income above operating expenses			$16,132 15
Charges upon income accrued during the year:			
Interest on funded debt			....
Interest and discount on unfunded debts and loans			....
Taxes, Municipal		$1,224 34	
Taxes, Provincial		65 00	
Taxes, Commutation			
			1,289 34
Rentals of leased railways:			
....			....
....			....
			....
Payments to sinking and other special funds:			
....			....
....			....
			....
Other deductions from income:			
Park, Boathouse, etc.		$1,360 75	
			1,360 75
Total charges and deductions from income			2,650 09
Net divisible income			$13,482 06
Total dividends declared			....
Surplus for the year ending June 30, 1920			$13,482 06
Amount of surplus, June 30, 1919			11,145 56
Credits to profit and loss account during the year			....
Total Credits			....
Debits to profit and loss account during the year:			
Depreciation Reserve	$3,500 00		
Total debits		3,500 00	
Net amount debited to profit and loss			3,500 00
Total surplus, June 30, 1920			$21,127 62

Earnings and Expenses of Operation

Earnings from operation:	
Receipts from passengers carried	$27,329 48
" carriage of mails	966 12
" carriage of express and parcels	....
" carriage of freight	22,543 39
" tolls for use of tracks by other companies	400 00
" rentals of buildings and other property	116 00
" advertising in cars	622 88
" interest on deposits	57 55
Other earnings from operation	....
Gross earnings from operation	$52,035 42

Expenses of Operation

General expenses:	
Salaries of general officers and clerks and attendants	1,898 00
General office expenses and supplies	496 88
Legal expenses	....
Insurance	984 96
Switching charges, if any	....
Other general expenses, advertising	160 88
Maintenance of roadbed and buildings:	
Repair of roadbed and track	4,950 85
Repair of electric line construction	502 15
Repair of buildings	79 20
Maintenance of equipment:	
Repair of cars	6,724 86
Repair of electric equipment of cars	3,983 26
Repair of miscellaneous equipment	283 60
Provender and stabling	....
Transportation Expenses:	
Cost of electric motive power, $1,662.96; less power sold, $129.00; net	1,533 96
Wages and compensation of persons employed in conducting transportation	11,103 57
Removal of snow and ice	1,047 12
Damages for injuries to persons and property	582 13
Tolls for trackage over other railways	....
Rentals of buildings and other property	....
Other transportation expenses—Car shed expense	1,589 60
Miscellaneous tiunsp	1,169 57
Total operating expenses	$37,090 59

Property Accounts—Additions and Deductions during the Year

Additions to railway:		
Extension of tracks (length..........feet)		....
New electric line construction (length..........feet)		....
Other additions to railway		....
Total additions to railway		....
Additions to equipment:		
Additional cars (..........in number)		....
Electric equipment of same		
Other additional rolling stock		
Other additions to equipment		
Total Additions to equipment		....
Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc.		
Additional equipment of power stations		
Other new buildings necessary for operation of railway		
Total additions to land and buildings		....
Additions to other permanent property:		
Re-establishment of Book Values	$70,114 01	
Total additions to other permanent property		....
Total additions to property accounts		$70,114 01

Deductions from property accounts (property sold or reduced in valuation and credited to property accounts):		
Sale of Property	107 15	
Total deductions from property accounts		107 15
Net addition to property accounts for the year		$70,006 86

GENERAL BALANCE SHEET—JUNE 30, 1920

ASSETS

Cost of railway:		
Roadbed and tracks		
Electric line construction, including poles, wiring, feeder lines, etc.		
Interest accrued during construction of railway		
Engineering and other expenses incident to construction		
Other items of railway cost		
Total cost of railway owned		....
Cost of equipment:		
Passenger cars and other rolling stock		
Electric equipment of same		
Other items of equipment		
Total cost of equipment owned		....
Cost of land and buildings:		
Land necessary for operation of railway		
Electric power stations, including equipment		
Other buildings necessary for operation of railway		
Total cost of land and buildings owned		....
Other permanent property		
Total cost of other permanent property owned		....
Total permanent investments		$225,706 86
Cash and current assets:		
Cash	$12,869 40	
Bills and accounts receivable	8,753 13	
Sinking and other special funds—deferred charges	409 72	
Other cash and current assets—Victory bonds	60 00	
Glengarry & Stormont Railway stock at nominal value	36 45	
Total cash and current assets		22,128 70
Miscellaneous assets:		
Materials and supplies	25 87	
Other assets and property		
Total miscellaneous assets		25 87
Profit and loss balance—deficit		....
Total		$247,861 43

LIABILITIES

Capital stock—common	$100,000 00
preferred	100,000 00
Total capital stock	$200,000 00
Funded debt	....
Real estate mortgages	....

Current liabilities:

Loans and notes payable		
Audited vouchers and accounts	$2,533 81	
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities		
Total current liabilities		2,533 81

Accrued liabilities:

Interest accrued and not yet due		
Taxes accrued and not yet due		
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total Accrued Liabilities		....

Sinking and other special funds:

Reserve for depreciation	$21,000 00	
Reserve for injuries and damages	3,200 00	
Total Sinking and Other Special Funds		24,200 00
Profit and loss balance—surplus		21,127 62
Total		$247,861 43

CAPITAL STOCK—REAL ESTATE MORTGAGES

Capital Stock:

Capital stock authorized by law, common	$100,000 00	
preferred	100,000 00	
Total capital stock authorized by law	$200,000 00	
Capital stock authorized by votes of company,		
preferred		
Total capital stock authorized by vote		
Capital stock issued and outstanding, common		$100,000 00
preferred		100,000 00
Total capital stock outstanding		$200,000 00
Amount paid in on .... shares not yet issued		....
Amount paid in on stock to be exchanged		....
Scrip convertible into stock		....
Other paid stock liability		....
Total capital stock liability		$200,000 00
Number of shares issued and outstanding, common		
preferred		
Total number of shares outstanding		
Number of stockholders, common		
preferred		
Total number of stockholders		
Amount of stock held, common		
preferred		
Total stock held		

REAL ESTATE MORTGAGES

Description of mortgaged property	Rate of interest	Mortgage when due	Amount	Interest paid during the year
...	...	...	...	...
...	...	...	...	...
Totals...	...	...	...	...

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

Funded Debt—Description of Bonds, etc.	Rate of Interest	Day of Maturity	Amount Outstanding	Interest paid during the year
...	...	...	...	...
...	...	...	...	...
Totals...	...	...	...	...

SINKING AND OTHER SPECIAL FUNDS

None.

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, etc.:	
Number of passengers paying revenue carried during the year	626,485
Number carried per mile of main railway track operated	156,621
Number of car miles run—Passenger	196,000
Freight	24,000
Average number of persons employed	30
If the company commenced operation during the year, give the date	...
Average amount received from each passenger	$4 36
Amount of passenger earnings per mile of road	$6,832 39
Freight:	
Number of tons freight earning revenue	112,700
Number of tons freight carried per mile of road	17,340
Average amount received for each ton of freight	20c
Average receipts per ton of freight per mile	$3 07
Average rate of speed of passenger cars per hour	9
Average rate of speed of freight cars per hour	5

Description of Equipment	No. of motor cars	Trailer cars	Official cars	Electric locomotives	Baggage and mail express cars	Cattle and box cars	Refrigerator cars	Platform cars	Coal and dump cars	Conductors' vans	Tool cars	Snow Plows	Snow sweepers	Equipped with fenders	Equipped with stoves	Equipped with electric heaters
Box passenger cars...	9	...	...	2	...	...	...	...	...	...	...	...	1	...	...	...
Open passenger cars...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses	...
Carts and snow sleds	...
Other railway rolling stock	...
Other highway vehicles	...
Horses	...
Other items of equipment	...

DESCRIPTION OF RAILWAY OWNED AND OPERATED

Railway Owned, Leased and Operated (by Electric Power)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	4			4	4
Length of second main track					
Total length of main track	4			4	4
Length of siding, switches, etc.	2½			2½	2½
Total, computed as single track	6½			6½	6½
Length of line under construct'n					

Eescription of Freight Carried

For year ending June 30, 1921

Flour		Grain		Live Stock		Lumber		Fuel		All other articles	Total tonnage	Remarks
Bbls.	Tons	Bush	Tons	No.	Tons	Ft.BM	Tons	Cords	Tons			Remarks
	300		350	0			25000		40000	43900	112700	

Description of Road Bed, Etc.

Names of the several cities and towns in which the railways operated by the Company are located: Cornwall, Ont.

Grade Crossings with Railroads, Etc.

Summary of Accidents to Property

Accidents to Persons

WAGES STREET RAILWAY CO.'S OR RADIAL RAILWAYS

	No. employed	Average No. of hours on duty per day	Wages per Day		
			1st Yr.	2nd Yr.	3rd Yr.
Inspectors—car checker	1	11	3 50	....	....
Conductors					
Motormen	1	12	....	....	5 40
Starters—One man car operations	8	10	3 15	3 30	....
Roadmen	6	9½	3 00	....	....
Linemen					
Engineers—Power House Operation	2	12	....	....	3 00
Blacksmiths					
Firemen					
Electricians	1	9½	....	....	4 50
Armature Winders					
Machinists and mechanics—Repair men	4	9½	3 00	....	....
Car cleaners					
Average number of employees	29				
Watchmen	1	12	2 60		
Switchmen and crossing tenders—office	3	9			
park	1	12	....	....	3 00

CORPORATE ORGANIZATION

Corporate name and address of the company:
Cornwall Street Railway, Light and Power Company, Limited, Cornwall, Ont.
Names and business address of principal officers:
President—Samuel Hamilton Ewing, 102 King Street, Montreal.
Vice-President—Wm. Hodge, Cornwall, Ont.
Treasurer—Ernest A. MacNutt, c/o Sun Life Assurance Co., Montreal.
Auditor—P. S. Ross & Sons, Montreal.
General Manager—W. L. Macfarlane, Cornwall, Ont.
Name of officer, and address, to whom correspondence regarding this report should be addressed—W. L. Macfarlane, manager, Cornwall, Ont.

Names and residence of Board of Directors:
Samuel Hamilton Ewing, 102 King Srreet, Montreal.
John Redpath Dougall, 226 Craig Street West, Montreal.
Thomas Bassett Macaulay, Sun Life Assurance Company, Montreal.
A. B. Colville, Sun Life Assurance Company, Montreal.
Wm. Hodge, Cornwall, Ont.

ANNUAL REPORT OF THE

FORT WILLIAM ELECTRIC RAILWAY COMPANY

FOR THE YEAR ENDING JUNE 30TH, 1920

GENERAL INFORMATION

Name of municipality or municipalities in which railway operates: City of Fort William.
Name of company: Fort William Electric Street Railway.
Date of incorporation: April 4, 1908—Sec. 2, Chap. 80–8, Edw. VII.
Dates of subsequent legislation: April 13, 1909—Sec. 7, Chap. 106–9, Edw. VII.; March 24, 1911, Sec. 6–7, Chap. 88–1, Geo. V.
Date of expiry of franchise: Owned by City.
State if power is purchased or generated by company: Purchased.
State if power is generated by steam or water power: Water.
Give number of power houses: One.

GENERAL EXHIBIT FOR THE YEAR

Gross earnings from operation		$183,076 07
Operating expenses		150,031 38
Net earnings from operation		$33,044 69
Miscellaneous income:		
Levy from City		31,767 06
Total miscellaneous income		....
Gross income above operating expenses		$64,811 75
Charges upon income accrued during the year:		
Interest on funded debt	$63,912 15	
Interest and discount on unfunded debts and loans		
Taxes, Municipal		
Taxes, Provincial		
Taxes, Commutation		
Rentals of leased railways		
	35,959 22	
Payments to sinking and other special funds		
Other deductions from income		
Total charges and deductions from income		99,871 37
Net divisible income		....
Dividends declared..........per cent on $		
..........per cent on $		
Total Dividends declared		....
Deficit for the year ending June 30, 1920		35,059 62
Amount of surplus or deficit June 30, 1921		
Credits to profit and loss account during the year		
Total credits		
Debits to profit and loss account during the year		
Total debits		
Net amount credited to profit and loss		....
Total deficit, June 30, 1920, exclusive of city levy		$35,059 26

EARNINGS AND EXPENSES OF OPERATION

Earnings from operation:		$199 45
Receipts from passengers carried	S. Cars	180,010 75
" carriage of mails		902 50
" carriage of express and parcels		....
" carriage of freight		....
" tolls for use of tracks by other companies		....
" rentals of buildings and other property		....
" advertising in cars		941 00
" interest on deposits		....
Other earnings from operation—sundry		34 63
Mileage account, City of Port Arthur		987 74
Gross earnings from operation		$183,076 07

Expenses of operation:	
General expenses:	
Salaries of general officers and clerks and attendants	4,946 03
General office expenses and supplies	656 06
Legal expenses	33 09
Insurance	4,140 66
Store expenses	161 84
Claims and damages	358 00
Rent	240 00
Auto	325 50
Murphy park	182 77
Track rental	500 00
Interlocking plant	95 25
Stores	2,737 30
Maintenance of roadbed buildings:	
Repair of roadbed and track	7,271 66
Repair of electric line construction	1,582 02
Repair of buildings	....
Motor generators	1,869 20
Power purchased	18,499 92
Maintenance of equipment:	
Repair of cars	14,039 58
Repair of electric equipment of cars	8,548 78
Shop Tools	269 56
Shop Expense	1,840 92
Transportation expenses:	
Cost of electric motive power, $........; less power sold, $........; net	....
Wages and compensation of persons employed in conducting transportation—	
Motormen	27,674 18
Conductors	31,616 93
Superintendents	1,753 67
Removal of snow and ice	3,238 37
Damages for injuries to persons and property—car service employees	10,254 30
Tolls for trackage over other railways—Victoria Ave. repairs	1,684 48
Rentals of buildings and other property—car service supplies	3,289 52
Other transportation expenses—car heating	1,819 71
Lubricants, oils, etc.	402 28
Total operating expenses	$150,031 38

PROPERTY ACCOUNTS—ADDITIONS AND DEDUCTIONS DURING THE YEAR

....

....

....

GENERAL BALANCE SHEET

ASSETS (DEC. 31, 1919)

Cost of railway:		
Roadbed and tracks	$587,900 43	
Paving Victoria Avenue	25,000 00	
Interest accrued during construction of railway		
Mt. McKay and Kakabeka Fall railway	9,000 00	
Other items of railway cost—Port Arthur end	49,399 79	
Total cost of railway owned		$671,300 22
Cost of equipment:		
Passenger cars and other rolling stock	$120,909 54	
Electric equipment of same	46,750 00	
Other items of equipment—Murphy park	6,256 33	
	1,245 06	
General	6,156 92	
Total cost of equipment owned		181,317 85
Cost of land and buildings:		
New sub station plans	425 27	
Land necessary for operation of railway—car barn site	19,593 11	
Electric power stations, including equipment—generator	33,542 12	
Other buildings necessary for operation of railway—car barn	66,544 60	
Total cost of land and buildings owned		120,105 10

Other permanent property, including cost of street railway:			
Construction material carried in City stores and loaned to Can. Car Foundry Company			119,276 83
Total cost of other permanent property owned			119,276 83
Total permanent investments			....
Cash and current assets:			
Cash		425 00	
Bills and accounts receivable		272,613 57	
Sinking and other special funds			
Other cash and current assets:			
Prepaid insurance	$1,100 34		
Stores	8,406 81		
Port Arthur	3,016 72		
Interest	1,204 25		
		13,728 12	
Total cash and current assets			286,766 69
Miscellaneous assets:			
Materials and supplies			
Other assets and property			
Total miscellaneous assets			1,378,766 69
Profit and loss balance—deficit			276,323 75
City of Fort William—balance due Electric railway			30,643 50
Total			$1,685,733 94

LIABILITIES

Capital stock—common		....
preferred		....
Total capital stock		....
Funded debt		$1,317,000 00
Real estate mortgages		....
Current liabilities:		
Loans and notes payable		
Audited vouchers and accounts		
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities—sundry	$ 6,797 82	
Fire insurance claims	89,322 55	
Total current liabilities		96,120 37
Accrued liabilities:		
Interest accrued and not yet due		
Taxes accrued and not yet due		
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		....
Sinking and other special funds		272,613 57
Total sinking and other special funds		....
Profit and loss balance—surplus		....
Total		$1,685,733 94

CAPITAL STOCK—REAL ESTATE MORTGAGES

....

....

....

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

Funded Debt—Description of Bonds, etc.	Rate of Interest	Day of Maturity	Amount Outstanding	Interest paid during the year
B./L. 509—Award 1908	5%	Oct. 1, 1938	52,000 00	$2,600 00
617—General	4½%	Fev. 1, 1939	170,000 00	7,650 00
699—St. Cars	4½%	Aug. 1, 1924	13,500 00	607 50
732—General	4½%	Feb. 1, 1940	137,000 00	6,165 00
606—Mt. McKay railway	4½%	Feb. 1, 1929	9,000 00	405 00
845—Paving	4½%	Feb. 1, 1926	20,000 00	900 00
853—General	4½%	Feb. 1, 1941	67,000 00	3,015 00
863—St. Cars	4½%	Feb. 1, 1926	40,500 00	1,822 50
1019—Paving	4½%	June 1, 1926	5,000 00	225 00
1193—General	5%	Aug. 1, 1942	200,000 00	10,000 00
1242—General	5%	Feb. 1, 1933	140,000 00	7,000 00
1390—General	5%	Feb. 1, 1944	238,000 00	11,900 00
1830—General	5%	Feb. 1, 1938	225,000 00	11,250 00
Totals			$1,317,000 00	$63,540 00

SINKING AND OTHER SPECIAL FUNDS

Amount December 31, 1918, of sinking fund	$230,198 40
of..........fund	....
Total, June 30, 1920	230,198 40
Additions during the year to..........fund	
to..........fund	
	42,415 17
Total including additions	272,613 57
Deductions during the year from..........fund	
from..........fund	
Total sinking and other special funds, December 31, 1919	$272,613 57

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, etc.:	
Number of passengers paying revenue carried during the year	3,675,252
Number carried per mile of main railway track operated	No record
Number of car miles run	702,531
Average number of persons employed	73
If the company commenced operation during the year, give date	
Average amount received from each passenger	
Amount of passenger earnings per mile of road	
Freight:	
Number of tons freight earning revenue	None
Number of tons freight carried per mile of road	
Average amount received for each ton of freight	
Average receipts per ton of freight per mile	
Average rate of speed of passenger cars per hour	
Average rate of speed of freight cars per hour	

Description of equipment	No. of motor cars	Trailer cars	Official cars	Electric locomotives	Baggage and mail express cars	Cattle and box cars	Refrigerator Cars	Platform cars	Coal and dump cars	Conductors' vans	Tool cars	Snow plows	Snow sweepers	Equipped with fenders	Equipped with stoves	Equipped with electric heaters
Box passenger cars	24	2	(Under construction after fire)									....	....	....	....	....
Open passenger cars	....	1										1	1	24	20	4

Miscellaneous Equipment

	Total Number
Barges and omnibuses	
Carts and snow sleds	One
Other railway rolling stock	
Other highway vehicles	
Horses	
Other items of equipment	

DESCRIPTION OF RAILWAY OWNED AND OPERATED

Railway Owned, Leased and Operated (by Electric Power)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	14.580		5.300		19.880
Length of second main line	4.260		5.300		9.560
Total length of main line	18.840		10.600		29.440
Length of sidings, switches, etc	.940				.940
Total, computed as single track	19.780		10.600		30.380
Length of line under construction					

Description of Freight Carried

For Year Ending June 30, 1920

Description of Road Bed, Etc.

Rails		Weight per yard		No. of ties to mile	General Remarks
Steel	Iron	Steel	Iron		
		80		1950	
		60		1950	

Names of the several cities and towns in which the railways operated by the company are located:

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks at Crossing	
			Railroad Tracks	Railroad Tracks
Crossings of railways with railroads at grade (.. in number), viz.:—				
With C.N.R. at Vic Ave	Unp.	B. O. 19319 B.O. 23983	2	2
Franklin St	Unp.	19319 23983	1	1
Frederica St	Pro.	Half interl'ck B. O. 7601	1	1
Montreal St	Unp.	....	1	1
Yonge St	Pro.	B. O. 8087	1	1
With C.P.R. Unp. Spur, Syndicate Ave	Unp.	10895	1	2
Yonge St	Pro.	8086	5	1
Pacific Ave	Pro.	16571	4	1
Island No. 2	Unp.	....	1	1
With G.T.R. at Yonge St	Pro.	8089	3	1
Montreal St	Unp.	8089	1	1
Syndicate Ave	Pro.	19811	1	2
Sprague Ave	Pro.	23028	1	1
Mission St	Unp.	20879	1	1
With Industrial Tracks, Montreal	Unp.	....	1	1
With C.P.R., Montreal St	Unp.	....	1	1
No. junctions with other railways—One Mt. McKay & Kakabeka Falls Rly	....	....	....	....
No. of overhead bridges	....	....	....	....
No. of highway crossings	....	....	....	....
Height of overhead bridges above rail level	....	....	....	....
Radius of sharpest curve	37′	....	....	....
No. of feet per mile of heaviest gradient	6%	....	....	....
Gauge of railway	4′ 8½″	....	....	....
Width of devil strip	6′ 11 1/3″	....	....	....
Total number of tracks at crossings	....	....	26	19
Number of above crossings at which frogs are inserted in the tracks			—Diamonds	30

Summary of Accidents to Property

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Accidents to Persons

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Wages Street Railway Co.'s or Radial Railways

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Corporate Organization

Corporate name and address of the company:
Fort William Electric Railway, Fort William, Ont.
Names and business address of principal officers:
President—Mayor H. Dennis.
Treasurer—H. James.
Clerk of Corporation—A. McNaughton.
General Counsel—Morris & Babe.
Auditor—P. H. B. Dawson.
General Manager—A. L. Farquharson.
Name of officer, and address, to whom correspondence regarding this report should be addressed:
H. James, Treasurer, City Hall, Fort William.

ANNUAL REPORT OF THE

GUELPH RADIAL RAILWAY COMPANY

For the Year Ending June 30, 1920

General Information

Name of municipality or Municipalities in which railway operates: Guelph.
Name of company: Guelph Radial Railway Company.
Date of incorporation: 1895.
Dates of subsequent legislation: 1901—1903—1905—1908—1914. The City of Guelph owns all paid-up stock.
Date of expiry of franchise: 1925.
Amount paid to municipality per year per mile of track: None.
Further amounts, if any, paid to municipality by way of percentage earnings: None.
Total amount paid municipality during year for franchise: Nil.
Appraised value of plant and tracks for purposes of taxation: No taxes on property other than permanent roadway.
Average speed of cars: 9 miles.
State if power is purchased or generated by company: Purchased from Light, Heat Com., Guelph.
State if power is generated by steam or water power: Hydro Electric.
Give number of power houses: None.

General Exhibit for the Year

Gross earnings from operation			$73,390 80
Operating expenses			81,901 89
Net Deficit from operation			$8,510 99
Miscellaneous income:			
Rental from building		250 00	
Station and car privilege		2,784 17	
Miscellaneous		2,275 85	
Total miscellaneous income			5,310 02
Gross deficit above operating expenses			3,200 97
Charges upon income accrued during the year:			
Interest on funded debt			
Interest and discount on unfunded debts and loans			
Taxes, Municipal	$1,715 14		
Taxes, Provincial			
Taxes, Commutation			
Rentals of leased railways			
Payments to sinking and other special funds			
Other deductions from income			
Total charges and deductions from income			1,715 14
Net divisible deficit			4,916 11
Dividends declared ....per cent. on $			
..........per cent. on			
Total dividends declared			....
Deficit for the year ending June 30, 1920			$4,916 11
Amount of surplus or deficit, June 30, 1920		$4,450 56	
Credits to profit and loss account during the year			
Total credits		$4,450 56	
Debits to profit and loss account during the year:			
Depreciation	$8,000 00		
Total debits		8,000 00	
Net amount credited to profit and loss			12,450 56
Total surplus or deficit, June 30, 1920			$17,366 67

EARNINGS AND EXPENSES OF OPERATION

Earnings from operation:	
Receipts from passengers carried	$69,402 55
carriage of mails	....
carriage of express and parcels	....
carriage of freight	3,988 25
tolls for use of tracks by other companies	....
rentals of buildings and other property	250 00
advertising in cars	....
interest on deposits	....
Other earnings from operation: Station car privilege	2,784 17
Miscellaneous	2,275 85
Gross earnings from operation	$78,700 82
Expenses of operation:	
General Expenses:	
Salaries of general officers and clerks and attendants	....
General office expenses and supplies	279 67
Legal expenses	....
Insurance	2,412 87
Switching charges, if any	....
Other general expenses: Injuries, damages	828 55
General expenses	2,701 38
Maintenance of roadbed and buildings:	
Repair of roadbed and track	6,513 83
Repair of electric line construction	1,946 46
Repair of buildings	....
Maintenance of equipment:	
Supt. of equipment	1,005 16
Repair of cars	9,094 51
Repair of electric equipment of cars	11,952 36
Repair of miscellaneous equipment	1,781 89
Provender and stabling	....
Transportation expenses:	
Supt. of transportation	1,487 60
Cost of electric motive power, $......; less power sold, $......; net	9,504 01
Wages and compensation of persons employed in conducting transportation	24,148 73
Removal of snow and ice	....
Damages for injuries to persons and property	....
Tolls for trackage over other railways	....
Rentals of buildings and other property	....
Other transportation expenses—miscellaneous	7,826 65
Store-room wages	418 22
Total operating expenses	$81,901 89

PROPERTY ACCOUNTS—ADDITIONS AND DEDUCTIONS DURING THE YEAR

Additions to railway:		
Extension of tracks (length..........feet)		
New electric line construction (length..........feet)		
Other additions to railway		
Total additions to railway		106 94
Additions to equipment:		
Additional cars (..........in number)		
Electric equipment of same	876 26	
Other additional rolling stock	74 25	
Other additions to equipment	947 70	
Total additions to equipment		1,898 21

Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc		
Additional equipment of power stations		
Other new buildings necessary for operation of railway		
Total additions to land and buildings		....
Additions to other permanent property:		
Total additions to other permanent property		....
Total additions to property accounts		2,005 15
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts):		
Total deductions from property accounts		....
Net addition to property accounts for the year		....

GENERAL BALANCE SHEET

ASSETS

Cost of railway: ¾		
Roadbed and tracks		
Electric line construction, including poles, wiring, feeder lines, etc.		
Interest accrued during construction of railway		
Engineering and other expenses incident to construction		
Other items of railway cost		
Total cost of railway owned		$208,272 59
Cost of equipment:		
Passenger cars and other rolling stock		
Electric equipment of same		
Other items of equipment		
Total cost of equipment owned		....
Cost of land and buildings:		
Land necessary for operation of railway		
Electric power stations, including equipment		
Other buildings necessary for operation of railway		
Total cost of land and buildings owned		....
Other permanent property		
Total cost of other permanent property owned		....
Total permanent investments		$208,272 59
Cash and current assets:		
Cash	10 00	
Bills and accounts receivable	798 38	
Sinking and other special funds		
Other cash and current assets		
Total cash and current assets		808 38
Miscellaneous assets:		
Materials and supplies	8,706 14	
Other assets and property—Charter	289 90	
Total miscellaneous assets		8,996 04
Profit and loss balance—deficit		17,366 97
Total		$235,443 78

LIABILITIES

Capital stock—common		
preferred		
Total capital stock		$169,870 00
Funded debt		
Real estate mortgages		
Current liabilities:		
Loans and notes payable		
Audited vouchers and accounts	9,136 27	
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities		
Bank overdraft	618 38	
Total current liabilities		9,754 65
Accrued liabilities:		
Interest accrued nad not yet due		
Taxes accrued and not yet due		
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		
Sinking and other special funds:		
Depreciation	55,819 13	
Total sinking and other special funds		55,819 13
Profit and loss balance—surplus		
Total		$235,443 78

CAPITAL STOCK—REAL ESTATE MORTGAGES

Capital Stock:			
Capital stock authorized by law, common			
preferred			
Total capital stock authorized by law			
Capital stock authorized by votes of company, common			
preferred			
Total capital stock authorized by vote			
Capital stock issued and outstanding, common			
preferred			
Total capital stock outstanding			
Amount psid in on..........shares not yet issued			
on stock to be exchanged			
Scrip convertible into stock			
Other paid stock liability			
Total capital stock liability			
Number of shares issued and outstanding,			
preferred			
Total number of shares outstanding			
Number of stockholders, common			
preferred			
Total number of stockholders			
Amount of stock held, common			
preferred			
Total stock held			$169,870 00

REAL ESTATE MORTGAGES

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FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

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SINKING AND OTHER SPECIAL FUNDS

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VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, etc.:

Number of passengers paying revenue carried during the year	1,446,371
Number carried per mile of main railway track operated	160,708
Number of car miles run	236,984
Average number of persons employed	38
If the company commenced operation during the year, give the date	......
Average amount received from each passenger	4.8
Amount of passenger earnings per mile of road	$7,977 30

Freight:

Number of tons freight earning revenue	17,939
Number of tons freight carried per mile of road	2062
Average amount received for each ton of freight	8c
Average receipts per ton of freight per mile	$2,607 40
Average rate of speed of passenger cars per hour	11 miles
Average rate of speed of freight cars per hour	10 miles

Description of equipment	No. of Motor Cars	Trailer Cars	Official Cars	Electric locomotives	Baggage and Mail Express Cars	Cattle and Box Cars	Refrigerator Cars	Platform Cars	Coal and Dump Cars	Conductors' Vans	Tool Cars	Snow Plows	Snow Sweepers	Equipped with Fenders	Equipped with Stoves	Equipped with Electric Heaters
Box passenger cars	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Open passenger cars	3	....	....	1	....	....	....	....		....	1	....	1	....	....	....

MISCELLANEOUS EQUIPMENT

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....

....

DESCRIPTION OF RAILWAY OWNED AND OPERATED

Railway Owned, Leased and Operated (by Electric Power)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	8.7				8.7
Length of second main track					
Total length of main track	8.7				8.7
Length of sidings, switches, etc.					
Total, computed as single tr'ck					
Length of line under construction					

Description of Freight Carried

Detail of freight not available—Total tonnage 17,939

Description Road Bed, Etc.

General Remarks—The weight of rails used is 40, 60, 80 pounds; portions being laid with either. The road bed in place is cement, others gravel.

Grade Crossings with Railroads, Etc.

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks at Crossing	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (......in number), viz.:—				
With Canadian Pacific Railway		Derails	1	
With Grand Trunk Rly. Siding			1	
With Canadian Pacific Siding			1	
No. junctions with other railways	3			
No. of overhead bridges	2		6	
No. of highway crossings				
Height of overhead bridges above rail level	14′ 6″			
Radius of sharpest curve	55′			
No. of feet per mile of heaviest gradient	6%			
Gauge of railway	4′ 8½″			
Width of devil strip				
Total number of tracks at crossings			9	
Number of above crossings at which frogs are inserted in the tracks				3

General Remarks and Explanations

Canadian Pacific Railway on Elora Road, Guelph.
Grand Trunk Railway on Woolwich Street, Guelph.
Canadian Pacific Railway on York Road, Guelph.

SUMMARY OF ACCIDENTS TO PROPERTY

Accidents	Due to unavoidable causes		Due to carelessness of employees		Due to carelessness of other personss	
	Serious	Trivial	Serious	Trivial	Serious	Trivial
Damage to Company's property						
Damage to property of Municipality						
Damage to private property	500 00					
Total	500 00					

Total amount paid during year for damages caused by accidents: $650.00.

ACCIDENTS TO PERSONS

Killed and Injured	From causes beyond their own control		From their own misconduct or carelessness		Total	
	Killed	Injured	Killed	Injured	Killed	Injured
Passengers		1				1
Employees						
Other persons						
Totals		1				1

WAGES STREET RAILWAY CO.'S OR RADIAL RAILWAYS

	No. Employed	Average No. of hours on Duty per day	Wages per Day		
			1st Yr.	2nd Yr.	3rd Yr.
Inspectors					
Conductors	11	118½	41c	43c	45c
Motormen	11	8½	41c	43c	45c
Starters					
Roadmen	5	10	40—45		
Linemen	2	10	45—47½		
Engineers					
Blacksmiths	1	10	45		
Firemen					
Electricians	1	10	45		
Armature winders	1	10	47½		
Machinists and mechanics	3	10	45—47½		
Car cleaners	2	10	$3.75 &	$4.00	
Average number of employees	38				
Watchmen					
Switchmen and crossing tenders					

CORPORATE ORGANIZATION

Corporate name and address of the company:
Guelph Radial Railway Company, Guelph.
Names and business address of principal officers:
President—Geo. M. Henry.
Treasurer—City Treasurer, J. Orr Rose, City Hall, Guelph.
Clerk of Corporation—Thomas James Moore. City Hall, Guelph.
General Counsel—Guthrie-Kerwin, Guelph.
Auditor—Fred Page Higgins, Toronto, Ont.
General Manager—City Manager T. J. Moore.
Name of officer, and address, to whom correspondence regarding this report should be addressed:
J. A. House, Manager, Guelph.

City Council of Guelph:

H. Westoby.
J. H. Simpson.
S. Penfold.
J. E. Carter.
R. H. Bryden.
D. H. Barlow.
C. H. Burgess.
T. H. Howard.
H. Quarmby.
W. Stephens.
W. G. Hood.
W. A. Cowan.
E. A. MacDonald.
G. M. Henry.
D. Martin.
W. A. Mahoney.
A. A. Buchner.
R. H. Wing.

ANNUAL REPORT OF THE

THE HAMILTON AND DUNDAS STREET RAILWAY COMPANY

FOR THE YEAR ENDING JUNE 30, 1920

GENERAL INFORMATION

Name of Municipality or Municipalities in which railway operates: Hamilton and Dundas.
Name of company: The Hamilton and Dundas Street Railway Company.
Date of incorporation: Ontario, 1875–6, Chapter 87.
Dates of subsequent legislation: 1879, Chapter 59; 1881, Chapter 65; 1884, Chapter 68; 1886, Chapter 68; 1890, Chapter 119; 1895, Chapter 100; 1898, Chapter 60.
Date of expiry of franchise: Hamilton, December 22, 1920; Dundas, 1927; Barton, Perpetual.

Amount paid to Municipality per year per mile of track: Hamilton, $300.00	$342 92
Further amounts, if any, paid to municipality by way of percentage earnings	
Total amount paid municipality during year for franchise	342 92
Appraised value of plant and tracks for purposes of taxation	31,835 00
Total taxes paid during year to municipality	1,066 59
Amount of aid received from municipality, if any	None
Power consumed per car mile in kilowatt hours	
Cost per horse power for motive power used in operating plant	
Cost of power per kilowatt per hour	
Cost of power per car mile	4.37c
Average speed of cars	12 miles

State if power is purchased or generated by company: Purchased.
State if power is generated by steam or water power: Water and steam.
Give number of power houses: None.

GENERAL EXHIBIT FOR THE YEAR

Gross earnings from operation			$94,841 91
Operating expenses			92,760 59
Net earnings from operation			2,081 32
Miscellaneous income:			
Total miscellaneous income			....
Gross income above operating expenses			2,081 32
Charges upon income accrued during the year:			
Interest on funded debt		5,000 00	
Interest and discount on unfunded debt and loans			
Taxes, Municipal	$1,066 59		
Taxes, Provincial	55 70		
Taxes, Commutation	342 92		
		1,465 21	
Rentals of leased railways			
Payments to sinking and other special funds			
Other deductions from income			
Total charges and deductions from income			6,465 21
Net divisible income			$4,383 89

Dividends declared, 8 per cent. on $100,000		8,000 00	
Total dividends declared			8,000 00
Surplus or deficit for the year ending June 30, 1920			$12,383 89
Amount of surplus or deficit, June 30, 1920			78,110 60
Credits to profit and loss account during the year			
Total credits			
Debits to profit and loss account during the year:			
Maintenance and renewal	$2,085 40		
Reserve			
Total debits		2,085 40	
Net amount debited to profit and loss			2,085 40
Total surplus, June 30, 1920			$63,641 31

EARNINGS AND EXPENSES OF OPERATION

Earnings from operation:	
Receipts from passengers carried	$84,192 73
carriage of mails	248 00
carriage of express and parcels	891 89
carriage of freight	124 29
tolls for use of tracks by other companies	2,795 68
rentals of buildings and other property	894 60
advertising in cars	100 00
interest on deposits	....
Other earnings from operation—Chartered cars	751 99
T.H. & B. Rly, half cost of maintenance and tracks used by them	4,842 73
Gross earnings from operation	$94,841 91
Expenses of operation:	
General expenses:	
Salaries of general officers and clerks and attendants	4,950 07
General office expenses and supplies	561 62
Legal expenses	2,302 92
Insurance	130 44
Switching charges, if any	....
Other general expenses—Advertising	83 85
Incidental	226 32
Maintenance of roadbed and buildings:	
Repair of roadbed and track	14,470 47
Repair of electric line construction	2,071 19
Repair of buildings	72 17
Maintenance of equipment:	
Repair of cars	2,117 93
Repair of electric equipment of cars	592 51
Repair of miscellaneous equipment	....
Provender and stabling	48 00
Transportation expenses:	
Cost of electric motive power, $......; less power sold, $......; net	8,002 83
Wages and compensation of persons employed in conducting transportation	30,709 43
Removal of snow and ice	3,302 99
Damages for injuries to persons and property	1,942 77
Tolls for trackage over other railways	....
Rentals of buildings and other property	17,805 91
Other transportation expenses	2,378 38
	990 79
Total operating expenses	$92,760 59

PROPERTY ACCOUNTS—ADDITIONS AND DEDUCTIONS DURING THE YEAR

Additions to railway:		
Extension of tracks (length......feet)		
New electric line construction (length......feet)		
Other additions to railway		
Total additions to railway		....

Additions to equipment:		
Additional cars (......in number)		
Electric equipment of same		
Other additional rolling stock		
Other additions to equipment		
Total additions to equipment		....
Additions to land and buildings:		
Additional land necessary for operation of railway	2,000 00	
New electric power stations, including machinery, etc		
Additional equipment of power stations		
Other new buildings necessary for operation of railway		
Total additions to land and buildings		2,000 00
Additions to other permanent property		....
Total additions to other permanent property		....
Total additions to property accounts		2,000 00
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts)		
Total deductions from property accounts		....
Net addition to property accounts for the year		$2,000 00

General Balance Sheet

Assets

Cost of railway:		
Roadbed and tracks		
Electric line construction, including poles, wiring, feeder lines, etc		
Interest accrued during construction of railway		
Engineering and other expenses incident to construction		
Other items of railway cost		
Total cost of railway owned		....
Cost of equipment:		
Passenger cars and other rolling stock		
Electric equipment of same		
Other items of equipment		
Total cost of equipment owned		....
Cost of land and buildings:		
Land necessary for operation of railway		
Electric power stations, including equipment		
Other buildings necessary for operation of railway		
Total cost of land buildings owned		....
Other permanent property		
Total cost of other permanent property owned		....
Total permanent investments		$221,584 39
Cash and current assets:		
Cash	67,240 95	
Bills and accounts receivable	7,230 02	
Sinking and other special funds		
Other cash and current assets—Insurance (fire)	20 00	
Total cash and current assets		74,490 97
Miscellaneous assets:		
Materials and supplies		
Other assets and property		
Total miscellaneous assets		....
Profit and loss balance—deficit		....
Total		$296,075 36

LIABILITIES

Capital stock—common		$100,000 00
preferred		
Total capital stock		$100,000 00
Funded debt		$100,000 00
Real estate mortgages		
Current liabilities:		
Loans and notes payable		
Audited vouchers and accounts		
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities—Maintenance and renewal fund	$29,591 69	
Accident insurance	2,690 06	
Total current liabilities		32,281 75
Accrued liabilities:		
Interest accrued nad not yet due		
Taxes accrued nad not yet due	$152 30	
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		152 30
Sinking and other special funds		
Total sinking and other special funds		....
Profit and loss balance—surplus		63,641 31
Total		$296,075 36

CAPITAL STOCK—REAL ESTATE MORTGAGES

Capital Stock:

Capital stock authorized by law, common		$100,000 00	
preferred			
Total capital stock authorized by law		$100,000 00	
Capital stock authorized by votes of company, common		$100,000 00	
preferred			
Total capital stock authorized by vote		$100,000 00	
Capital stock issued and outstanding, common			100,000 00
preferred			....
Total capital stock outstanding			....
Amount paid in on..........shares not yet issued			....
Amount paid in on stock to be exchanged			....
Scrip convertible into stock			....
Other paid stock liability			....
Total capital stock liability			$100,000 00
Number of shares issued and outstanding, common	1,000		
preferred			
Total number of shares outstanding	1,000		
Number of stockholders, common	8		
preferred			
Total number of stockholders	8		
Amount of stock held, common			
preferred			
Total stock held			

REAL ESTATE MORTGAGES

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

Funded Debt—Description of Bonds, etc.	Rate of Interest	Day of Maturity	Amount Outstanding	Interest paid during the year
1st Mortgage	5	....	$100,000 00	5,000 00
....	....	....	....	....
....	....	....	....	....
Totals	....	....	$100,000 00	$5,000 00

SINKING AND OTHER SPECIAL FUNDS

Amount June 30, 1919, of maintenance and renewal fund		$27,506 29
Amount June 30, 1919, of accident insurance fund		4,162 80
Total, June 30, 1919		$31,669 09
Additions during the year to maintenance and renewal fund	$2,085 40	
....		2,085 40
Total including additions		33,754 59
Deductions during the year from accident insurance fund	1,472 74	
....		1,472 74
Total sinking and other special funds, June 30, 1919		$32,281 75

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, etc.:	
Number of passengers paying revenue carried during the year	1,122,336
Number carried per mile of main railway rtack operated	160,334
Number of car miles run	198,232
Average number of persons employed	33
If the company commenced operation during the year, give the date	....
Average amount received from each passenger	7.5c
Amount of passenger earnings per mile of road	$12,027 53
Freight:	
Number of tons freight earning revenue	35
Number of tons freight carried per mile of road	5
Average amount received for each ton of freight	3.50
Average receipts per ton of freight per mile	50
Average rate of speed of passenger cars per hour	12
Average rate of speed of freight cars per hour	None

Description of equipment	No. of motor cars	Trailer cars	Official cars	Electric locomotives	Baggage and mail express cars	Cattle and box cars	Refrigerator cars	Platform cars	Coal and Dump cars	Conductors' vans	Tool cars	Snow plows	Snow sweepers	Equipped with fenders	Equipped with stoves	Equipped with electric heaters
Box passenger cars	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
Open passenger cars	2	....	....	....	....	....	....	....	....	....	....	....	....	....	2	

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses	....
Carts and snow sleds	....
Other railway rolling stock	....
Other highway vehicles	....
Horses	....
Other items of equipment	....

DESCRIPTION OF RAILWAY OWNED AND OPERATED

RAILWAY OWNED, LEASED AND OPERATED (BY ELECTRIC POWER)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	5.848	....	1.132	6.98	6.98
Length of second main track	.2	....	....	.2	.2
Total length of main track	6.048	....	....	7.18	7.18
Length of sidings, switches, etc	1.6	....	....	1.6	1.6
Total, computed as single track	7.648	....	....	8.78	8.78
Length of line under construction	....	....	....	....	....

DESCRIPTION OF FREIGHT CARRIED

....

....

....

DESCRIPTION OF ROAD BED, ETC.

Rails		Weight per yard		No. ties to mile	General remarks
Steel	Iron	Steel	Iron		
....	....	65	....	2,460	....
....	....	....	....	....	....
....	....	....	....	....	....

Names of the several cities and towns in which the railways operated by the company are located: Hamilton and Dundas.

Grade Crossings with Railroads, Etc.

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks Crossing	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (......in number), viz.:—				
With T. H. & B. Rly, James & Hunter St..		D.R. & gates	2	2
No. junctions with other railways	3			
No. of overhead bridges	1			
No. of highway crossings				
Height of overhead bridges above rail level	15			
Radius of sharpest curve	40			
No. of feet per mile of heaviest gradient	7%			
Gauge of railway	4′ 8″½			
Width of devil strip	5′			
Total number of tracks at crossings				
Number of above crossings at which frogs are inserted in the tracks.				

General Remarks and Explanations

....

....

Summary of Accidents to Property

Accidents	Due to unavoidable causes		Due to carelessness of employees		Due to carelessness of other persons	
	Serious	Trivial	Serious	Trivial	Serious	Trivial
Damage to Company's property						
Damage to property of Municipality						1
Damage to private property						2
Total						3

Total amount paid during year for damages caused by accidents:..........

Accidents to Persons

Killed and Injured	From causes beyond their own control		From their own misconduct or carelessness		Total	
	Killed	Injured	Killed	Injured	Killed	Injured
Passengers						
Employees						
Other persons				1		1
Totals				1		1

	No.	Average No. of hours on duty per day	Wages per day		
			1st Yr.	2nd Yr.	3rd Yr.
Inspectors					
Conductors	7	10	$3.50	$4.50	$5.20
Motormen	7		3.50	4.50	5.20
Starters					
Roadmen	8		4.50		
Linemen	1		6.00		
Engineers					
Engineers					
Blacksmiths					
Firemen					
Electricians					
Armature Winders	4		5.70		
Machinists and Mechanics	1		4.60		
Car cleaners	29				
Average number of employees					
Watchmen					
Switchmen and crossing tenders					

CORPORATE ORGANIZATION

Corporate name and address of the company:
The Hamilton and Dundas Street Railway Company.
Names and business address of principal officers:
President—John Dickenson, Hamilton, Ont.
Vice-President—James Dixon, Hamilton, Ont.
Treasurer—James Dixon, Hamilton, Ont.
Clerk of Corporation—Geo. D. Fearmore, Hamilton, Ont.
General Counsel—Gibson, Levy & Gibson, Hamilton, Ont.
Auditor—C. S. Scott, F.C.A., Hamilton, Ont.
General Manager—E. P. Coleman, Hamilton, Ont.
Superintendent—Geo. E. Waller, Hamilton, Ont.
Name of officer, and address, to whom correspondence regarding this report should be addressed:
E. P. Coleman, General Manager, Hamilton, Ont.

Names and residence of Board of Directors:
J. R. Moodie, Hamilton, Ont.
James Dixon, Hamilton, Ont.
Wm. C. Hawkins, Hamilton, Ont.
James Dickenson, Hamilton, Ont.
James Dickenson, Hamilton, Ont.
Alex. Bruce, Toronto, Ont.
J. W. MacDonald, Toronto, Ont.

ANNUAL REPORT OF THE

HAMILTON, GRIMSBY AND BEAMSVILLE ELECTRIC RAILWAY COMPANY

FOR THE YEAR ENDING JUNE 30, 1920

GENERAL INFORMATION

Name of Municipality or Municipalities in which railway operates: Hamilton, Grimsby and Beamsville.
Name of company: Hamilton, Grimsby and Beamsville Electric Railway Company.
Date of incorporation: Ontario, 1892, Chapter 95, April 14th; 1897, Chapter 97; 1901, Chapter 80; 1907, Chapter 99.

By-law 180—Beamsville, 1926
238—Beamsville, 1926
287—Beamsville, 1913
108—Beamsville, 1916
1145—Clinton, 1926
346—Lincoln, 1926
338—Barton, Perpetual
395—Saltfleet, Perpetual

Amount paid to municipality per mile of track—Lincoln	$50 00
Hamilton	300 00
Further amounts, if any, paid to municipality by way of percentage earnings	None
Total amount paid municipality during year for franchise	$837 87
Appraised value of plant and tracks for purposes of taxation	$163,725 00
Total taxes paid during year to municipality	5,002 21
Amount of aid received from municipality, if any	None
Power consumed per car mile in kilowatt hours	....
Cost per horse power for motive power used in operating plant	....
Cost of power per kilowatt per hour	....
Cost of power per car mile	4 55..
Average speed of cars	12 miles
State if power is purchased or generated by company	Purchased
State if power is generated by steam or water power	Water and steam
Give number of power houses	2 Sub Stations......

GENERAL EXHIBIT FOR THE YEAR

Gross earnings from operation			$187,548 00
Operating expenses			200,508 48
Net earnings from operation			$12,960 48
Miscellaneous income			
Total miscellaneous income			
Gross income above operating expenses			....
Charges upon income accrued during the year:			
Interest on funded debt		7,500 00	
Interest and discount on unfunded debts and loans		4,268 58	
Taxes, Municipal	$5,002 21		
Taxes, Provincial	225 90		
Taxes, Commutation	837 87		
		6,065 98	
Rentals of leased railways			
Payments to sinking and other special funds			
Maintenance and renewal fund	2,500 00		
		2,500 00	
Other deductions from income			
Total charges and deductions from income			20,334 56
Net divisible income			$33,295 04
Dividends declared..........per cent. on $			
..........per cent. on $			
Total dividends declared			....
Deficit for the year ending June 30, 1919			$33,295 04
Amount of surplus, June 30, 1919			1,909 10
Credits to profit and loss account during the year			
Total credits			
Debits to profit and loss account during the year			
Total Debits			
Net amount credited to profit and loss			....
Total Deficit, June 30, 1920			$31,385 94

EARNINGS AND EXPENSES OF OPERATION

Earnings from operation:	
Receipts from passengers carried	$120,484 10
carriage of mails	750 00
carriage of express and parcels	7,757 45
carriage of freight	45,119 80
tolls for use of tracks by other companies	......
rentals of buildings and other property	12,250 05
advertising in cars	350 00
interest on deposits	....
Other earnings from operation—Chartered cars	836 60
Gross earnings from operation	$187,548 00
Expenses of operation:	
General expenses:	
Salaries of general officers and clerks and attendants	$11,290 72
General office expenses and supplies	1,864 20
Legal expenses	352 72
Insurance	893 81
Switching charges, if any	....
Other general expenses—Advertising	60 28
Incidental	746 09
Maintenance of roadbed and buildings:	
Repair of roadbed and track	21,590 40
Repair of electric line construction	6,037 15
Repair of buildings	221 11
Maintenance of equipment:	
Repair of cars	18,018 72
Repair of electric equipment of cars	8,968 34
Repair of miscellaneous equipment	726 55
Provender and stabling	1,942 20
Transportation expenses:	
Cost of electric motive power, $......; less power sold, $......; net	20,745 72
Wages and compensation of persons employed in conducting transportation	56,337 11
Removal of snow and ice	2,207 26
Damages for injuries to persons and property	11,793 03
Tolls for trackage over other railways	....
Rentals of buildings and other property	30,409 27
Other transportation expenses—Supplies on cars	4,159 64
Heating and incidental	2,144 16
Total operating expenses	$200,508 48

PROPERTY ACCOUNTS—ADDITIONS AND DEDUCTIONS DURING THE YEAR

Additions to railway:		
Extension of tracks (length.........feet)		
New electric line construction (length.........feet)		
Other additions to railway		
Renewing switch heavier rail	$1,739 85	
Total additions to railway		$1,739 85
Additions to equipment:		
Additional cars (........in number)		
Electric equipment of same		
Other additional rolling stock		
Other additions to equipment		
Removal motormen's seats, 4 cars	85 49	
Total additions to equipment		85 49

Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc.		
Additional equipment of power stations		
Other new buildings necessary for operation of railway		
Total additions to land and buildings		....
Additions to other permanent property		
Total additions to other permanent property		....
Total additions to property accounts		$1,825 34
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts):		
Total deductions from property accounts		....
Net addition to property accounts for the year		$1,825 34

General Balance Sheet

Assets

Cost of railway:		
Roadbed and tracks		
Electric line construction, including poles, wiring, feeder lines, etc.		
Interest accrued during construction of railway		
Engineering and other expenses incident to construction		
Other items of railway cost		
Total cost of railway owned		....
Cost of equipment:		
Passenger cars and other rolling stock		
Electric equipment of same		
Other items of equipment		
Total cost of equipment owned		....
Cost of land and buildings:	Not separated	
Land necessary for operation of railway		
Electric power stations, including equipment		
Other buildings necessary for operation of railway		
Total cost of land and buildings owned		....
Other permanent property		
Total cost of other permanent property owned		$493,984 57
Total permanent investments		....
Cash and current assets:		
Cash		
Bills and accounts receivable	3,456 44	
Sinking and other special funds		
Other cash and current assets—Fire insurance		135 09
Total cash and current assets		3,591 53
Miscellaneous assets:		
Materials and supplies		
Other assets and property		
Total miscellaneous assets		....
Profit and loss balance—Deficit		31,385 94
Total		$528,962 04

Liabilities

Capital stock—common		$235,000 00
preferred		....
Total capital stock		$235,000 00
Funded debt		$150,000 00
Real estate mortgages		....

Current liabilities:

Loans and notes payable	100,802 82	
Audited vouchers and accounts	248 68	
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid	12 50	
Rentals due and unpaid		
Miscellaneous current liabilities		
Maintenance and renewal fund	39,343 10	
Accident insurance	703 00	
Total current liabilities		141,110 10

Accrued liabilities:

Interest accrued and not yet due	1,250 00	
Taxes accrued and not yet due	1,601 94	
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		2,851 94
Sinking and other special funds		
Total sinking and other special funds		....
Profit and loss balance—Surplus		....
Total		$528,962 04

CAPITAL STOCK—REAL ESTATE MORTGAGES

Capital Stock:

Capital stock authorized by law, common	$235,000 00	
preferred		
Total capital stock authorized by law	235,000 00	
Capital stock authorized by votes of company, common	235,000 00	
preferred		
Total capital stock authorized by vote	235,000 00	
Capital stock issued and outstanding, common		$235,000 00
preferred		....
Total capital stock outstanding		235,000 00
Amount paid in on..........shares not yet issued		....
Amount paid in on stock to be exchanged		....
Scrip convertible into stock		....
Other paid stock liability		....
Total capital stock liability		$235,000 00

Number of shares issued and outstanding, common	2,350	
preferred		
Total number of shares outstanding	2,350	
Number of stockholders, common	8	
preferred		
Total number of stockholders	8	
Amount of stock held, common		
preferred		
Total stock held		

REAL ESTATE MORTGAGES

None

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

Funded Debt—Description of Bonds, etc.	Rate of Interest	Day of Maturity	Amount Outstanding	Interest paid during the year
1st Mortgage	5	May 1-33	$150,000 00	$7,500 00
Totals			$150,000 00	$7,500 00

SINKING AND OTHER SPECIAL FUNDS

Amount June 30, 1919, of maintenance and renewals fund		$36,843 10
Amount June 30, 1919, of accident insurance fund		....
Total, June 30, 1919		$36,843 10
Additions during the year to maintenance and renewal fund	$2,500 00	
Additions during the year to accident insurance fund	703 00	
		3,203 00
Total including additions		$40,046 10
Total sinking and other special funds June 30, 1919		$40,046 10

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of traffic, etc.:	
Number of passengers paying revenue carried during the year	882,099
Number carried per mile of main railway track operated	39,031
Number of car miles run	455,672
Average number of persons employed	74
If the company commenced operation during the year, give the date	....
Average amount received from each passenger	13.66c
Amount of passenger earnings per mile of road	5,331 15
Freight:	
Number of tons freight earning revenue	61,540
Number of tons freight carried per mile of road	2,280
Average amount received for each ton of freight	73c
Average receipts per ton of freight per mile	....
Average rate of speed of passenger cars per hour	15 miles
Average rate of speed of freight cars per hour	15 miles

Description of equipment	No. of Motor Cars	Trailer Cars	Official Cars	Electric Locomotives	Baggage and Mail Express Cars	Cattle and Box Cars	Refrigerator Cars	Platform Cars	Coal and Dump Cars	Conductors' Vans	Tool Cars	Snow Plows	Snow Sweepers	Equipped with Fenders	Equipped with Stoves	Equipped with Electric Heaters
Box passenger cars	8				4									12	4	8
Open passenger cars														2		

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses	
Curbs and snow sleds	
Other railway rolling stock	
Other highway vehicles	
Horses	
Other items of equipment	

DESCRIPTION OF RAILWAY OWNED AND OPERATED

RAILWAY OWNED, LEASED AND OPERATED (BY ELECTRIC POWER)

Railway owned, etc	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	22.6			22.6	22.6
Length of second main track					
Total length of main track	22.6			22.6	22.6
Length of sidings, switches, etc	3.6			3.6	3.6
Total, computed as single track	26.2			26.2	26.2
Length of line under construction					

DESCRIPTION OF FREIGHT CARRIED

DESCRIPTION OF ROAD BED, ETC.

Rails		Weight per yard		No. ties to mile	General Remarks
Steel	Iron	Steel	Iron		
		56		2,540	
		65		2,540	
		84		528	Steel ties in concrete.

Names of the several cities and towns in which the railways operated by the company are located: Hamilton, Grimsby and Beamsville.

GRADE CROSSINGS WITH RAILROADS, ETC.

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks at Crossing	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (......in number, viz.:				
With T. H. & B. Rly, Maple Ave........	....	D.R.	1	1
With G.T.R., Main and Ferguson........	....	D.R. & Watchman	1	1
No. junctions with other railways........	....	....	....	....
No. of overhead bridges........	....	....	....	....
No. of highway crossings........	....	....	....	....
Height of overhead bridges above rail level.	....	....	....	....
Radius of sharpest curve........	....	....	....	....
No. of feet per mile of heaviest gradient....	....	....	....	....
Gauge of railway........	....	....	....	....
Width of devil strip........	....	....	....	....
Total number of tracks at crossings...	....	....	2	2

Number of above crossings at which frogs are inserted in the tracks........................2

GENERAL REMARKS AND EXPLANATIONS

....

....

....

SUMMARY OF ACCIDENTS TO PROPERTY

Accidents	Due to unavoidable causes		Due to carelessness of employees		Due to carelessness of other persons	
	Serious	Trivial	Serious	Trivial	Serious	Trivial
Damage to Company's property..........	....	10	....	4	....	....
Damage to property of municipality........	....	....	....	....	....	....
Damage to private property..........	....	5	....	2	....	1
Total..........	....	15	....	6	....	1

Total amount paid during year for damages caused by accidents..........

ACCIDENTS TO PERSONS

Killed and Injured	From causes beyond their own control		From their own misconduct or carelessness		Total	
	Killed	Injured	Killed	Injured	Killed	Injured
Passengers..........	....	2	....	....	....	2
Employees..........	....	2	....	....	....	2
Other persons..........	....	1	1	....	1	1
Totals..........	....	5	1	....	1	5

WAGES STREET RAILWAY CO'S OR RADIAL RAILWAYS

	No. Employed	Average No. of hours on duty per day	Wages per day		
			1st Yr.	2nd Yr.	3rd Yr.
Inspectors					
Conductors	15	10	3.50 4.50	$4.50	$5.20
Motormen	15	10	3.50 4.50	$4.50	$5.20
Starters					
Roadmen	14		$4.50		
Linemen	2		6.00		
Engineers—Sault Ste. Marie	4	8	5.00		
Blacksmiths	2	10	5.60		
Firemen					
Electricians	2		5.80		
Armature Winders	1		5.80		
Machinists and Mechanics	7		5.70		
Car Cleaners	2		4.60		
Average number of employees	65				
Watchmen	1		2.90		
Switchmen and Crossing tenders					

CORPORATE ORGANIZATION

Corporate name and address of the company:

Hamilton, Grimsby and Beamsville Electric Railway Company.

Names and business address of principal officers:

President—Wm. C. Hawkins, Hamilton, Ont.

Vice-President—John Dickenson, Hamilton, Ont.

Treasurer—James Dixon, Hamilton, Ont.

Clerk of Corporation—G. D. Fearman, Hamilton, Ont.

General Counsel—Gibson, Levy & Gibson, Hamilton, Ont.

Auditor—C. S. Scott, F.C.A., Hamilton, Ont.

General Manager—E. P. Coleman, Hamilton, Ont.

Superintendent—Geo. E. Waller, Hamilton, Ont.

Name of officer, and address, to whom correspondence regarding this report should be addressed:

E. P. Coleman, General Manager, Hamilton, Ont.

Names and residence of Board of Directors·

J. R. Moodie, Hamilton, Ont.

James Dixon, Hamilton, Ont.

Wm. C. Hawkins, Hamilton, Ont.

John Dickenson, Hamilton, Ont.

W. E. Phin, Hamilton, Ont.

Sir John M. Gibson, Hamilton, Ont.

Robert Hobson, Hamilton, Ont.

ANNUAL REPORT OF THE

HAMILTON STREET RAILWAY COMPANY

FOR THE YEAR ENDING JUNE 30, 1920

GENERAL INFORMATION

Name of Municipality or Municipalities in which railway operates: Hamilton, Ont.
Name of company: The Hamilton Street Railway Company.
Date of incorporation: Ontario, 1873—Chapter 100.
Dates of subsequent legislation: Ontario, 1893—Chapter 90.
Date of expiry of franchise: Hamilton 1928.
Amount paid to municipality per year per mile of track: Barton, $100.00
Hamilton, $400.00

	$9,116 27
Further amounts, if any, paid to municipality by way of percentage earnings	$76,165 14
Total amount paid municipality during year for franchise	85,281 41
Appraised value of plant and tracks for purposes of taxation	287,210 00
Total taxes paid during year to municipality	9,165 63
Amount of aid received from municipality, if any	None
Power consumed per car mile in kilowatt hours	
Cost per horse power for motive power used in operating plant	
Cost of power per kilowatt per hour	
Cost of power per car mile	2.31c
Average speed of cars	12 miles
State if power is purchased or generated by company	Purchased
State if power is generated by steam or water power	Water and steam
Give number of power houses	None

GENERAL EXHIBIT FOR THE YEAR

Gross earnings from operation	$955,709 66
Operating expenses	737,605 64
Net earnings from operation	$218,104 02
Miscellaneous income	
Total miscellaneous income	....
Gross income above operating expenses	$218,104 02

Charges upon income accrued during the year:

Interest on funded debt		$16,629 80	
Interest and discount on unfunded debts and loans		1,238 10	
Taxes, Municipal	$9,165 63		
Taxes, Provincial	2,158 16		
Taxes, Commutation	85,281 41		
		96,605 20	
Rentals of leased railways			
Payments to sinking and other special funds			
Maintenance and renewal			
Reserve	6,893 18		
		6,893 18	
Other deductions from income			
Total charges and deductions from income			121,366 28

Net divisible income		96,737 74
Dividends declared, 7 per cent on $, $1,205,000.00	84,350 00	
Total dividends declared		84,350 00
Surplus for the year ending June 30, 1919		$12,387 74
Amount of surplus, June 30, 1919		459,033 13
Credits to profit and loss account during the year		
Total credits		
Debits to profit and loss account during the year		
Total debits		
Net amount credited to profit and loss		
Total surplus, June 30, 1920		$471,420 87

EARNINGS AND EXPENSES OF OPERATION

Earnings from operation:	
Receipts from passengers carried	$949,647 11
'' carriage of mails	....
'' carriage of express and parcels	....
'' carriage of freight	....
'' tolls for use of tracks by other companies	....
'' rentals of buildings and other property	5,015 40
'' advertising in cars	725 00
'' interest on deposits	....
Other earnings from operation—Chartered cars	322 15
Gross earnings from operation	$955,709 66
Expenses of operation:	
General expenses:	
Salaries of general officers and clerks and attendants	31,102 13
General office expenses and supplies	2,164 58
Legal expenses	1,712 10
Insurance	2,935 31
Switching charges, if any	....
Other general expenses—Advertising	311 77
Incidental	1,405 36
Maintenance of Roadbed and Buildings:	
Repair of roadbed and track	24,066 55
Repair of electric line construction	12,794 73
Repair of buildings	111 53
Maintenance of equipment:	
Repair of cars	74,911 15
Repair of electric equipment of cars	57,589 54
Repair of miscellaneous equipment	....
Provender and stabling	....
Transportation expenses:	
Cost of electric motive power, $......; less power sold, $......; net	70,029 12
Wages and compensation of persons employed in conducting transportation	333,967 87
Removal of snow and ice	6,933 65
Damage for injuries to persons and property	47,475 04
Tolls for trackage over other railways	....
Rentals of buildings and other property	26,371 35
Other transportation expenses—Supplies on cars	22,333 54
Heating and incidental	21,390 32
Total operating expenses	737,605 64

PROPERTY ACCOUNTS—ADDITIONS AND DEDUCTIONS DURING THE YEAR

Additions to railway:		
Extension of tracks (length..........feet)		
New electric line construction (length..........feet)		
Other additions to railway—Old track renewed in concrete	14,643 65	
Total additions to railway		$14,643 65

Additions to equipment:		
Additional cars (........in number)		
Electric equipment of same		
Other additional rolling stock		
Other additions to equipment		
Removable motorman's seats in 54 cars	1,261 14	
Total additions to equipment		1,261 14
Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc		
Additional equipment of power stations		
Other new buildings necessary for operation of railway		
Total additions to land and buildings		....
Additions to other permanent property		
Total additions to other permanent property		....
Total additions to property accounts		15,904 79
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts)		
Total deductions from property accounts		....
Net addition to property accounts for the year		$15,904 79

General Balance Sheet

Assets

Cost of railway:		
Roadbed and tracks		
Electric line construction, including poles, wiring, feeder lines, etc		
Interest accrued during construction of railway		
Engineering and other expenses incident to construction		
Other items of railway cost		
Total cost of railway owned		....
Cost of equipment:		
Passenger cars and other rolling stock		
Electric equipment of same		
Other items of equipment		
Total cost of equipment owned		....
Cost of land and buildings:		Not Reported
Land necessary for operation of railway		
Electric power stations, including equipment		
Other buildings necessary for operation of railway		
Total cost of land and buildings owned		....
Other permanent property		
Total cost of other permanent property owned		....
Total permanent investments		$2,287,477.99
Cash and current assets:		
Cash		3,500 00
Bills and accounts receivable		4,701 47
Sinking and other special funds		
Other cash and current assets—Fire insurance	330 00	
Total cash and current assets		8,531 47
Miscellaneous assets:		
Materials and supplies		
Other assets and property		
Total miscellaneous assets		....
Profit and loss balance—deficit		....
Total		$2,296,009.46

LIABILITIES

Capital stock—Common		$1,205,000.00
Preferred		....
Total capital stock		$1,205,000.00
Funded debt		360,000.00
Real estate mortgages		....
Current liabilities:		
Loans and notes payable		18,319 19
Audited vouchers and accounts		21,662 85
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid	1,035 00	
Rentals due and unpaid		
Miscellaneous current liabilities		
Accident insurance reserve	26,629 97	
Maintenance and renewal reserve	90,260 32	
Total current liabilities		157,907 33
Accrued liabilities:		
Interest accrued and not yet due	401 45	
Taxes accrued and not yet due	1,279 81	
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		1,681 26
Sinking and other special funds—Reserve	100,000 00	
Total sinking and other special funds		100,000 00
Profit and loss balance—surplus		471,420 87
Total		$2,296,009 46

CAPITAL STOCK—REAL ESTATE MORTGAGES

Capital Stock:

Capital stock authorized by law, common		$1,205,000 00	
preferred			
Total capital stock authorized by law			
Capital stock authorized by votes of company, common		$1,205,000 00	
preferred			
Total capital stock authorized by vote			
Capital stock issued and outstanding, common			$1,205,000 00
preferred			....
Total capital stock outstanding			$1,205,000 00
Amount paid in on..........shares not yet issued			....
Amount paid in on stock to be exchanged			....
Scrip convertible into stock			....
Other paid stock liability			....
Total capital stock liability			$1,205,000 00
Number of shares issued and outstanding, common	24,100		
preferred			
Total number of shares outstanding	24,100		
Number of stockholders, common	8		
preferred			
Total number of stockholders	8		
Amount of stock held, common			
preferred			
Total stock held			

REAL ESTATE MORTGAGES

....

....

....

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

Funded Debt—Description of Bonds, etc.	Rate of Interest	Day of Maturity	Amount Outstanding	Interest paid during the year
1st Mortgage Bonds..................	4½	22–12–28	$360,000 00	$16,629 80
....	....	....	....	....
....	....	....	....	....
....	....	....	....	....
Totals..........................	....	....	$360,000 00	$16,629 80

SINKING AND OTHER SPECIAL FUNDS

Amount June 30, 1919, of Maintenance and renewal fund......................		$83,947 99
Accident insurance fund.............................		17,922 95
Total, June 30, 1919..		$101,870 94
Additions during the year to maintenance and renewal fund..........	$6,312 33	
accident insurance fund................	8,707 02	
		15,019 35
Total including additions..		$116,890 39
Deductions during the year from...		
Total sinking and other special funds, June 30, 1919....................		$116,890 39

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, etc.:	
Number of passengers paying revenue carried during the year............	22,655,546
Number carried per mile of main railway track operated..................	672,271
Number of car miles run..	3,033,146
Average number of persons employed..	395
If the company commenced operation during the year, give the date......	....
Average amount received from each passenger.............................	4.19c
Amount of passenger earnings per mile of road............................	$28,179 51
Freight:	
Number of tons freight earning revenue.....................................	
Number of tons freight carried per mile of road............................	
Average amount received for each ton of freight...........................	
Average receipts per ton of freight per mile................................	
Average rate of speed of passenger cars per hour..........................	12 miles
Average rate of speed of freight cars per hour.............................	

Description of Equipment	No. of motor cars	Trailer cars	Official cars	Electric locomotives	Baggage and mail express cars	Cattle and box cars	Refrigerator cars	Platform cars	Coal and dump cars	Conductors' vans	Tool cars	Snow plows	Snow sweepers	Equipped with fenders	Equipped with stoves	Equipped with electric heaters
Box passenger cars	78	14	....	....	....	....	....	....	...	1	....	4	97	77	15	...
Open passenger cars	19	..	....	....	....	....	....	....	....	....	....	....	19	..	....	...

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses	......
Carts and snow sleds	....
Other railway rolling stock	....
Other highway vehicles	....
Horses	....
Other items of equipment	....

DESCRIPTION OF RAILWAY OWNED AND OPERATED

RAILWAY OWNED, LEASED AND OPERATED (BY ELECTRIC POWER)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	17.4	....	....	17.4	17.4
Length of second main track	16.3	....	....	16.3	16.3
Total length of main track	33.7	....	....	33.7	33.7
Length of sidings, switches, etc.	....	....	....	....	....
Total, computed as single					
Length of line under construction	....	....	....	....	....

DESCRIPTION OF FREIGHT CARRIED

None

DESCRIPTION OF ROAD BED, ETC.

Rails		Weight per yard		No. ties to mile	General Remarks
Steel	Iron	Steel	Iron		
....	....	65	....	2,460	....
....	....	65	....	528	Steel ties in concrete.
....	....	87	....	528	....
....	....	....	....	....	....

Names of the several cities and towns in which the railways operated by the Company a located: Hamilton.

GRADE CROSSINGS WITH RAILROADS, ETC.

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks Crossing	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (......in number), viz.:				
With T. H. & B. Ry., Hunter & James		D.R. & gates	2	2
" Main & Gage		D.R. & watch	1	2
" Barton St. E.		"	1	12
" Oliver Plow		" man	1	2
" Irondale		"	2	2
" Grasselli Chemical		"	1	2
With G.T.R., King & Ferguson		"	1	2
" Barton & Ferguson		D.R. & gates	2	2
" Kenilworth & Beach Rd.		D.R. & Wch-	1	2
With Radial Ry., Kenilworth & Beach Rd.		" man	2	2
No. junctions with other railways	3			
No. of overhead bridges				
No. of highway crossings				
Height of overhead bridges above rail level	16 ft.			
Radius of sharpest curve	35			
No. of feet per mile of heaviest gradient				
Gauge of railway	4′ & 8½″			
Width of devil strip	4′ & 5′			
Total number of tracks at crossings			14	20

Number of above crossings at which frogs are inserted in the tracks........................

GENERAL REMARKS AND EXPLANATIONS

....

....

....

SUMMARY OF ACCIDENTS TO PROPERTY

Accidents	Due to unavoidable causes		Due to carelessness of employees		Due to carelessness of other persons	
	Serious	Trivial	Serious	Trivial	Serious	Trivial
Damage to Company's property		146	....	151	....	52
Damage to property of municipality						
Damage to private property		82	....	15	....	95
Total		228	....	166	....	147

Total amount paid during year for damages caused by accidents........................

ACCIDENTS TO PERSONS

Killed and Injured	From causes beyond their own control		From their own misconduct or carelessness		Total	
	Killed	Injured	Killed	Injured	Killed	Injured
Passengers		10		25		35
Employees		6				6
Other persons	3	7		42	3	49
Totals	3	23		67	3	90

WAGES STREET RAILWAY CO'S OR RADIAL RAILWAYS

	No. Employed	Average No. of hours on Duty per day	Wages per day		
			1st Yr.	2nd Yr.	3rd Yr.
Inspectors	5	10	$5.80		
Conductors	137		3.80-4.00	$4.50	$5.20
Motormen	137		"	"	"
Starters	1		$3.00	part time	only.
Roadmen	10		4.50		
Linemen	4		6.00		
Engineers					
Blacksmiths	3		5.60		
Firemen					
Electricians	5		5.80		
Armature winders	4		5.80		
Machinists and mechanics	47		5.70		
Car cleaners	13		4.60		
Average number of employees	378				
Watchmen	1		4.50		
Switchmen and crossing tenders	11		2.90		

CORPORATE ORGANIZATION

Corporate name and address of the company:
The Hamilton Street Railway Company.

Names and business address of principal officers:
President—W. E. Phin, Hamilton, Ont.
Vice-President—John Dickenson, Hamilton, Ont.
Treasurer—James Dixon, Hamilton, Ont.
Clerk of Corporation—G. D. Fearman, Hamilton, Ont.
General Counsel—Gibson, Levy & Gibson, Hamilton, Ont.
Auditor—C. S. Scott, F.C.A., Hamilton, Ont.
General Manager—E. P. Coleman, Hamilton, Ont.
Superintendent—G. W. Waller, Hamilton, Ont.

Name of officer, and address, to whom correspondence regarding this report should be addressed:
E. P. Coleman, General Manager, Hamilton, Ont.

Names and residence of Board of Directors:
J. R. Moodie, Hamilton, Ont.
James Dixon, Hamilton, Ont.
Wm. C. Hawkins, Hamilton, Ont.
John Dickenson, Hamilton, Ont.
John Dickenson, Hamilton, Ont.
W. E. Phin, Hamilton, Ont.
Alex. Bruce, Toronto, Ont.
J. M. McDonnell, Toronto, Ont.

ANNUAL REPORT OF THE
HAMILTON AND BARTON INCLINE RAILWAY COMPANY

FOR THE YEAR ENDING JUNE 30, 1920

BALANCE SHEET AT DECEMBER 31, 1920

ASSETS		1920	1920
Current:			
Cash on hand			$93 97
Bank of Nova Scotia—Current			288 27
Savings			377 66
Accounts receivable			71 20
W. F. Anderson			30 00
Inventories—Oil and waste, fuel and repairs			1,331 33
Dominion of Canada War Loan			9,722 10
			$11,914 53
Invested:			
Plant, equipment, road bed, buildings, etc.			90,401 78
Insurance prepaid			565 19
LIABILITIES			
Current:			
Accounts payable		$ 998 55	
Commutation Tickets		280 15	
		1,278 70	
Shareholders:			
Capital stock		61,500 00	
Surplus		40,102 80	
Balance, January 1, 1920	$42,949 60		
Less dividend and charges	4,240 00		
	$38,709 60		
Profit for period	1,393 20		
	$40,102 80		
		$102,881 50	$102,881 50

PROFIT AND LOSS FOR YEAR ENDING DECEMBER 31, 1920

	1920	1920
Earnings from January 1st to December 31		$27,018 92
Interest		583 16
Expenses:		
Wages	$9,301 95	
Fuel (gas)	2,835 45	
Fuel (Coal)	4,672 38	
Repairs	7,205 16	
Taxes and water rates	674 05	
Insurance	729 32	
Oil and waste	68 67	
Printing and stationery	392 18	
Clothing	......	
Expense	306 31	
Stores	23.41	
Profit for period	$1,393 20	
	$27,602 08	$27,602 08

PROFIT AND LOSS

Amount forward—December 31, 1919		$42,949 60
Less Directors' and Auditors' fees	$550.00	
Less dividend paid in 1920	3,690 00	
		4,240 00
		$38,709 60
Profit for 1920		1,393 20
		$40,102 80

ANNUAL REPORT OF THE

HAMILTON MOUNTAIN PARK COMPANY, LIMITED

FOR THE YEAR ENDING JUNE 30, 1920

GENERAL INFORMATION

Name of municipality or municipalities in which railway operates: Hamilton, Ont.
Name of company: Hamilton Mountain Park Company, Limited.
Date of incorporation: July 28th, 1899—Recorded August 19, 1899.
Dates of subsequent legislation:
Date of expiry of franchise.
Amount paid to municipality per year per mile of track: Nil.
Further amounts, if any, paid to municipality by way of percentage earnings, % on $: Nil.
Total amount paid municipality during year for franchise: Nil.

Railway property, dwelling house, tracks, cars, equipment, and land formerly occupied by theatre	$122,784 74
Less reserve	18,417 69
	$104,367 05
Total taxes paid during year to municipality	$1,363 77
Amount of aid received from municipality, if any	None

Power consumed per car mile in kilowatt hours............
Cost per horse power for motive power used in operating plant............
Cost of power per kilowatt per hour............
Cost of power per car mile............
Average speed of cars............
State if power is purchased or generated by Company: Company purchase power from Hydro-Electric.
State if power is generated by steam or water power............
Give number of power houses: One power house—Electric.

STATEMENT OF ASSETS AND LIABILITIES

AS AT DECEMBER 31, 1919

ASSETS

Land account		$30,000 00	
Railway property, dwelling house, tracks, cars, equipment and land			
Railway property, dwelling house, tracks, cars, equipment and land formerly occupied by theatre	$122,784 74		
Less reserve for depreciation	18,417 69		
		104,367 05	
Accounts receivable		376 32	
Conductors' Loan Account		100 00	
St. Stephen's church		1,200 00	
Insurance unexpired		133 00	
Cash on hand and in bank		4,763 47	
			$140,939 84

LIABILITIES

To the Public:		
Mortgage account and interest accrued	18,692 35	
Accounts payable	2,131 01	
Tickets outstanding	2,033 50	
George F. Webb	1,293 03	
To the Shareholders:		
Capital Stock	27,800 00	
Special Reserve	42,609 79	
		94,559 68
Surplus		$46,380 16

W. G. E. BOYD, Auditor.

Hamilton, Feb. 7th, 1920.

STATEMENT OF PROFIT AND LOSS

REVENUE ACCOUNT

Earnings:		
Ticket sales, passengers, freight, etc.		$36,371 05
Operating and other expenses:		
Wages	$8,066 10	
Fuel, power and light	1,275 35	
Oil and Waste	147 79	
Interest	2,058 29	
Insurance claim	245 00	
Directors, auditors' fees, etc., general expense, telephone, taxes, water rates, salary, legal expense, supplies and repairs	7,933 47	
Reserve for depreciation, plant, machinery, railway property, etc.	6,139 23	
Insurance	839 36	
Income tax	1,333 37	
		$28,038 96
Profit for year ending December 31, 1919		$8,332 09

PROFIT AND LOSS ACCOUNT

Amount at credit of Profit and Loss, December 31, 1918	39,716 07
Profit for year ending December 31, 1919	8,332 09
	$48,048 16
Less dividend	1,668 00
Amount at credit of Profit and Loss, December 31, 1919	$46,380 16

Hamilton, Feb. 7, 1920.

ANNUAL REPORT OF THE
HUNTSVILLE AND LAKE OF BAYS RAILWAY COMPANY

For the Year Ending June 30, 1920

General Information

Name of municipality or municipalities in which railway operates: Franklin Township, District of Muskoka.

Name of company: The Huntsville and Lake of Bays Railway Company.

Date of incorporation: 30th April, 1900.

Dates of subsequent legislation: 22nd May, 1903, and 9th April, 1907.

Date of expiry of franchise	
Amount paid to municipality per year per mile of track	
Further amounts, if any, paid to municipality by way of percentage earnings, % on $	
Total amount paid municipality during year for franchise	
Appraised value of plant and tracks for purposes of taxation	$5,050 00
Total taxes paid during year to municipality	64 00
Amount of aid received from municipality, if any	
Power consumed per car mile in kilowatt hours	
Cost per horse power for motive power used in operating plant	
Cost of power per kilowatt per hour	
Cost of power per car mile	
Average speed of cars	About 8 miles
State if power is purchased or generated by company	By Company
State if power is generated by steam or water power	Steam
Give number of power houses	Two Engines (small locomotives)

General Exhibit for the Year

Gross earnings from operation			8,552 19
Operating expenses			$5,932 07
Net earnings from operation			$2,620 12
Miscellaneous income			
Total miscellaneous income			
Gross income above operating expenses			$2,620 12
Charges upon income accrued during the year:			
Interest on funded debt			
Interest and discount on unfunded debts and loans			
Taxes, Municipal	$64 00		
Taxes, Provincial			
Taxes, Commutation			
		$64 00	
Rentals of leased railways			
Payments to sinking and other special funds			
Other deductions from income			
Total charges and deductions from income			64 00
Net divisible income			$2,556 12
Interest 6% on $27,800.00		$1,668 00	
Total dividends declared			1,668 00
Surplus for the year ending December 31, 1920			$888 12
Amount of deficit, December 31, 1919			719 14
Credits to profit and loss account during the year			
Total credits			
Debits to profit and loss account during the year			
Total debits			
Net amount credited to profit and loss			
Total surplus, December 31st, 1920			$168 98

Earnings and Expenses of Operation

Earnings from operation:		
Receipts from passengers carried		$2,929 73
" carriage of mails		30 00
" carriage of express and parcels and carriage of freight		2,119 30
" tolls for use of tracks by other companies		....
" rentals of buildings and other property		....
" advertising in cars		....
" interest on deposits		....
Other earnings from operation: Lumber		3,198 66
Bark		274 50
Gross earnings from operation		$8,552 19
Expenses of operation:		
General expenses:		
Salaries of general officers and clerks and attendants		....
General office expenses and supplies		....
Legal expenses		....
Insurance		139 05
Switching charges, if any		....
Other general expenses: Water service	$5 85	
Boiler inspection	$18 50	
Uniform	29 35	
		53 70
Maintenance of roadbed and buildings:		
Repair of roadbed and track (estimated)		200 00
Repair of electric line construction		....
Repair of buildings		....
Maintenance of equipment:		
Repair of cars	(Estimated) –	
Repair of electric equipment of cars	" –	764 78
Repair of miscellaneous equipment	" –	
Provender and stabling	" –	
Transportation expenses:		
Cost of electric motive power, $......; less power sold,$......; net		....
Wages and compensation of persons employed in conducting transportation		3,456 35
Removal of snow and ice		....
Damage for injuries to persons and property		....
Tolls for trackage over other railways		....
Rentals of buildings and other property		....
Other transportation expenses—Fuel		1,268 19
Oil and grease		50 00
Total operating expenses		$5,932 07

Property Accounts—Additions and Deductions During the Year 1920

Additions to railway:		
Extension of tracks (length......feet)		
New electric line construction (length......feet)		
Other additions to railway		
Total Additions to Railway		....
Additions to equipment:		
Additional cars (one open passenger)	969 99	
Electric equipment of same		
Other additional rolling stock		
Other additions to equipment—Steam pump for water service	165 00	
Total additions to equipment		1,134 99

Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc.		
Additional equipment of power stations		
Other new buildings necessary for operation of railway		
Total additions to land and buildings		....
Additions to other permanent property		
Total additions to other permanent property		....
Total additions to property accounts		....
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts)		
Total deductions from property accounts		....
Net addition to property accounts for the year		$1,134 99

GENERAL BALANCE SHEET

ASSETS

Cost of railway:		
Roadbed and tracks	$15,045 89	
Electric line construction, including poles, wiring, feeder lines, etc.		
Interest accrued during construction of railway	2,325 43	
Engineering and other expenses incident to construction	2,814 16	
Other items of railway cost		
Total cost of railway owned		$20,185 48
Cost of equipment:		
Passenger cars and other rolling stock	6,783 39	
Electric equipment of same		
Other items of equipment—One 10-ton loading crane	1,760 71	
One steam pump	165 00	
Total cost of equipment owned		8,709 10
Cost of land and buildings:		
Land necessary for operation of railway		
Electric power stations, including equipment		
Other buildings necessary for operation of railway		
Total cost of land and buildings owned		390 73
Other permanent property		
Total cost of other permanent property owned		....
Total permanent investments		....
Cash and current assets:		
Cash		
Bills and accounts receivable		
Sinking and other special funds		
Other cash and current assets		
Total cash and current assets		....
Miscellaneous assets:		
Materials and supplies		
Other assets and property		
Total miscellaneous assets		29,265 31
Profit and loss balance—deficit		....
Total		$29,285 31

LIABILITIES—DECEMBER 31, 1920

Capital stock—common		$27,800 00
preferred		....
Total capital stock		27,800 00
Funded debt		....
Real estate mortgages		....
Current liabilities:		
Loans and notes payable		
Audited vouchers and accounts		
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities		
The Huntsville, Lake of Bays & Lake Simcoe Navigation Co.—		
Rail account in 1917	350 22	
For car and pump in 1920	1,134 99	
Total current liabilities		1,485 21
Accrued liabilities:		
Interest accrued and not yet due		
Taxes accrued and not yet due		
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		....
Sinking and other special funds		
Total sinking and other special funds		....
Profit and loss balance—surplus		168 98
Total		$29,454 19

CAPITAL STOCK—REAL ESTATE MORTGAGES

Capital Stock:		
Capital stock authorized by law, common	$50,000 00	
preferred		
Total capital stock authorized by law	$50,000 00	
Capital stock authorized by votes of company, common		
preferred		
Total capital stock authorized by vote		
Capital stock issued and outstanding, common		$27,800 00
preferred		....
Total capital stock outstanding		$27,800 00
Amount paid in on........shares not yet issued		....
Amount paid in on stock to be exchanged		....
Scrip convertible into stock		....
Other paid stock liability		....
Total capital stock liability		....

Number of shares issued and outstanding, common	278
preferred	
Total number of shares outstanding	278
Number of stockholders, common	
preferred	
Total number of stockholders	6
Amount of stock held, common	$27,800 00
preferred	
Total stock held	$27,800 00

REAL ESTATE MORTGAGES

No Mortgaged Property

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, etc.:

Number of passengers paying revenue carried during the year	19,970
Number carried per mile of main railway track operated	19,770
Number of car miles run (estimated)	2,800 miles
Average number of persons employed	8
If the company commenced operation during the year, give the date:	April 26 to Dec. 1, 1920
Average amount received from each passenger	14.82c
Amount of passenger earnings per mile of road	$2,038 08

Freight:

Lumber and Bark	3,890 40
Number of tons freight earning revenue (estimated)	4,850 tons
Number of tons freight carried per mile of road	4,850 tons
Average amount received for each ton of freight	$1.53
Average receipts per ton of freight per mile	1.53
Average rate of speed of passenger cars per hour	About 8 miles
Average rate of speed of freight cars per hour	About 4 miles

Description of Equipment	No. of motor cars	Trailer cars	Official cars	Electric locomotives	Baggage and mail express cars	Cattle and box cars	Refrigerator cars	Platform cars	Coal and dump cars	Conductors' vans	Tool cars	Snow plows	Snow sweepers	Equipped with fenders	Equipped with stoves	Equipped with electric heaters
Open passenger cars	...	...	...	...	2	...	...	7	...	...			...	...	2	...
Box passenger cars	...	1			...	...							...	...	...	...

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses Carts and snow sleds Other railway stock Other highway vehicles Horses Other items of equipment	None

One 10-ton loading crane (equipped with car wheels, etc.)........................

DESCRIPTION OF RAILWAY OWNED AND OPERATED

RAILWAY OWNED, LEASED AND OPERATED (BY ELECTRIC POWER)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	$1\frac{7}{16}$ miles				
Length of second main track					
Total length of main track	$1\frac{7}{16}$ miles				
Length of sidings, switches, etc.	$\frac{5}{16}$ miles				
Total, computed as single track	$1\frac{3}{4}$ miles				
Length of line under construction	None				

DESCRIPTION OF FREIGHT CARRIED

Lumber		Fuel		All other Articles	Total Tonnage	Remarks
Ft.,B.M	Tons	Cords	Tons			
1418535	2300	Bark 183	200	2350	4850	Tonnage estimated Not weighed

NOTE—All freight, lumber, bark, etc., is loaded into and off the cars by the company.

DESCRIPTION OF ROAD BED, ETC.

Rails		Weight per yard		No. Ties to mile	GENERAL REMARKS
Steel	Iron	Steel	Iron		
$1\frac{3}{4}$		90″		Est. 1800	Operated only during season of open navigation in each year (about May 1st to November 20.

Names of the several cities and towns in which the railways operated by the company are located: Village Portage, Ont., Township of Franklin, between Peninsular Lake and Lake of Bays, Muskoka.

GRADE CROSSINGS WITH RAILROADS, ETC.

No. junctions with other railways	None
No. of overhead bridges	None
No. of highway crossings	2
Height of overhead bridges above rail level	None
Radius of sharpest curve	
No. of feet per mile of heaviest gradient	
Gauge of railway	3 ft. 8½ ins.
Width of devil strip	
Total number of tracks at crossing	2
Number of above crossings at which frogs are inserted in the tracks	None

GENERAL REMARKS AND EXPLANATIONS

Operated along public highway for the greater part of length of railway, i.e., between points, commonly known as North Portage and South Portage, respectively.

SUMMARY OF ACCIDENTS TO PROPERTY

ACCIDENTS TO PERSONS

WAGES STREET RAILWAY CO'S OR RADIAL RAILWAYS

CORPORATE ORGANIZATION

Corporate name and address of the company:
The Huntsville and Lake of Bays Railway Company, Huntsville, Ont.

Names and business address of principal officers:
President—Chas. O. Shaw, Huntsville, Ont.
Vice-President—Chas. G. Shaw, Huntsville, Ont.
Treasurer—John W. McKee, Huntsville, Ont.
General Counsel—Thomas Johnson, Bracebridge, Ont.
Auditor—Wm. Howells, Huntsville, Ont.
General Manager—Wm. J. Moore, Huntsville, Ont.
Superintendent—Thomas R. Barnes, Huntsville, Ont.

Name of officer, and address, to whom correspondence regarding this report should be addressed:
W. J. Moore, General manager and secretary, Huntsville, Ont.

Names and residence of Board of Directors:
Chas. O. Shaw, Huntsville, Ont.
Chas. G. Shaw, Huntsville, Ont.
John W. McKee, Huntsville, Ont.
Wm. J. Moore, Huntsville, Ont.
C. W. Conway, Huntsville, Ont.

ANNUAL REPORT OF THE INTERNATIONAL TRANSIT COMPANY

For the Year Ending June 30, 1920

General Information

Name of municipality or municipalities in which railway operates: Sault Ste. Marie, Ont.
Name of company: The International Transit Company.
Date of Incorporation: May 22, 1888.
Dates of subsequent legislation: August 12, 1902.
Date of expiry of franchise: Sault Ste. Marie—July 1, 1926.
Formerly Stulton—Nov. 15, 1922.

Amount paid to municipality per year per mile of track	None
Further amounts, if any, paid to municipality by way of percentage earnings	None
Total amount paid municipality during year for franchise	None
Appraised value of plant and tracks for purposes of taxation: Specific tax under Lake Superior Corporation.	
Total Taxes paid during year to municipality	
Amount of aid received from municipality, if any	None
Power consumed per car mile in kilowatt hours	No record
Cost per horse power for motive power used in operating plant	$25.00 per H.P. per annum.
Cost of power per kilowatt per hour	No record
Cost of power per car mile	
Average speed of cars	10 miles per hour
State if power is purchased or generated by Company	Purchased
State if power is generated by steam or water power	
Give number of power house	

General Exhibit for the Year

Gross earnings from operation		$106,625 93
Operating expenses		72,382 17
Net earnings from operation		$34,243 76
Miscellaneous income—Interest, etc	825 16	
Total miscellaneous income		825 16
Gross income above operating expenses		$35,068 92
Charges upon income accrued during the year:		
Interest on funded debt	5,625 00	
Interest and discount on unfunded debts and loans	4,129 52	
Taxes, Municipal and Provincial	814 09	
Taxes, Commutation		
	814 09	
Rentals of leased railways		
Payments to sinkig and other special funds		
Other deductions from income		
Total charges and deductions from income		$10,586 61
Net divisible income		$25,500 31
Dividends declared, 10 per cent on $150,00		
Total dividends declared		15,000 00
Surplus for the year ending June 30, 1920		$10,500 31
Amount of surplus or deficit, June 30, 1919		$101,828 61

Credits to profit and loss account during the year		
Total credits		
Debits to profit and loss account during the year		
Total debits		
Net amount credited to profit and loss		......
Total surplus, June 30, 1920		$112,328 92

Earnings and Expenses of Operation

Earnings from operation:	
Receipts from passengers carried	$105,015 70
" carriage of mails	....
" carriage of express and parcels	....
" carriage of freight	....
" tolls for use of tracks by other companies	....
" rentals of buildings and other property	....
" advertising in cars, etc.	1,610 23
" interest on deposits	....
Other earnings from operation	....
Gross earnings from operation	$106,625 93

Expenses of operation:	
General expenses:	
Salaries of general officers and clerks and attendants	$3,754 25
General office expenses and supplies	690 40
Legal expenses	618 93
Insurance	3,849 20
Switching charges, if any	....
Other general expenses—Travelling, store expenses, etc.	636 27
Maintenance of Roadbed and buildings:	
Superintendence	680 00
Repair of roadbed and track	2,777 05
Repair of electric line construction	387 56
Repair of building	203 27
Maintenance of equipment:	
Superintendence	615 00
Repair of cars	5,952 77
Repair of electric equipment of cars	5,458 13
Repair of miscellaneous equipment	1,468 54
Provender and stabling	....
Transportation expenses:	
Superintendence	785 00
Cost of electric motive power, $12,000; less power sold,	12,000 00
Wages and compensation of persons employed in conducting transportation	30,841 28
Removal of snow and ice	....
Damages for injuries to persons and property	......
Tolls for trackage over other railways	.....
Rentals of buildings and other property	.....
Other transportation expenses—miscellaneous car service expenses	945 87 724 65
Total operating expenses	$72,382 17

Property Accounts—Additions and Deductions during the Year

Additions to railway:		
Extension of tracks (length........feet)		
New electric line construction (length........feet)		
Other additions to railway		
Total additions to railway		....

Additions to equipment:		
Additional cars (......in number)		
Electric equipment of same		
Other additional rolling stock		
Other additions to equipment		
Total additions to equipment		....
Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc.		
Additional equipment of power stations		
Other new buildings necessary for operation of railway		
Total additions to land and buildings		
Additions to other permanent property:		
Ferry, wharves and docks	$2,438 25	
Total additions to other permanent property		$2,438 25
Total additions to property accounts		....
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts):		
1073 ft. track rails	$3,000 00	
1 Trailer Body	100 00	
Total deductions from property accounts		$3,100 00
Net addition to property accounts for the year		$661 75

General Balance Sheet

Assets

Cost of railway:		
Roadbed and tracks	$129,166 48	
Electric line construction, including poles, wiring, feeder lines, etc.	28,784 68	
Interest accrued during construction of railway	5,450 28	
Engineering and other expenses incident to construction	3,543 52	
Other items of railway cost—Organization	10,543 82	
Total cost of railway owned		$177,488 78
Cost of equipment:		
Passenger cars and other rolling stock	32,580 23	
Electric equipment of same	23,940 59	
Other items of equipment	502 95	
....	2,783 35	
Total cost of equipment owned		59,807 12
Cost of land and buildings:		
Land necessary for operation of railway		
Electric power stations, including equipment	26,086 76	
Other buildings necessary for operation of railway		
Total cost of land and buildings owned		26,086 76
Other permanent property—Rights and contracts	84,013 94	
Uncompleted investment work	45,430 92	
Ferry boat and other equipment	113,458 24	
Total cost of other permanent property owned		242,903 10
Total permanent investments		$506,285 76
Cash and current assets:		
Cash	4,194 09	
Bills and accounts receivable	1,615 35	
Prepaid and open accounts	3,862 16	
Other cash and current assets—Victory bonds	5,000 00	
Treasury Securities	7,500 00	
Total cash and current assets		22,171 60

Miscellaneous assets:		
Materials and supplies	8,480 09	
Other assets and property		
Total miscellaneous assets		8,480 09
Profit and loss balance—deficit		....
Total		$536,937 45

LIABILITIES

Capital stock: common		$150,000 00
preferred		....
Total capital stock		$150,000 00
Funded debt		100,000 00
Real estate mortgages		....
Current liabilities:		
Loans and notes payable	73,000 00	
Audited vouchers and accounts	11,100 87	
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities		
U.S. Alien per capita fund	1,392 00	
Outstanding tickets	813 06	
Total current liabilities		86,305 93
Accrued liabilities:		
Interest accrued and not yet due		
Taxes accrued and not yet due	857 40	
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		857 40
Sinking and other special funds		
Reserve for depreciation and special purposes	$85,907 68	
Workmen's compensation and public liability	10,392 91	
Total sinking and other special funds		96,300 59
Profit and loss balance—surplus		103,473 53
Total		$536,937 45

CAPITAL STOCK—REAL ESTATE MORTGAGES

Capital Stock:		
Capital stock authorized by law, common	$150,000 00	
preferred		
Total capital stock authorized by law	$150,000 00	
Capital stock authorized by votes of company, common	$150,000 00	
preferred		
Total capital stock authorized by vote	$150,000 00	
Capital stock issued and outstanding, common		$150,000 00
preferred		....
Total capital stock outstanding		$150,000 00
Amount paid in on........shares not yet issued		....
Amount paid in on stock to be exchanged		....
Scrip convertible into stock		....
Other paid stock liability		....
Total capital stock liability		....

Number of shares issued and outstanding, common	300	
preferred		
Total number of shares outstanding	3,000	
Number of stockholders, common	8	
preferred		
Total number of stockholders	8	
Amount of stock held, common		150,000 00
preferred		
Total stock held		$150,000 00

REAL ESTATE MORTGAGES

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

Funded Debt—Description of Bonds, etc.	Rate of Interest	Day of Maturity	Amount Outstanding	Interest paid during the year
First mortgage	5%	July 1–1912 and $20,000.00 annually thereafter	$100,000 00	$5,625 00
Totals			$100,000 00	$5,625 00

SINKING AND OTHER SPECIAL FUNDS

Amount June 30, 1919, of Reserve for general purpose fund		$71,972 63
Amount June 30, 1919, of Workmen's Compensation and Public Liability fund		7,415 06
Total, June 30, 1919		79,387 69
Additions during the year to general fund	$15,000 00	
Additions during the year to workmen's and P.L.	3,156 70	
		$18,156 70
Total including additions		$97,544 39
Deductions during the year from general fund	1,064 95	
Deductions during the year from workmen's and P.L.	178 85	
		1,243 80
Total sinking and other special funds, June 30, 1919		$96,300 59

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, etc.:	
Number of passengers paying revenue carried during the year	$2,172,149
Number carried per mile of main railway track operated	60,505
Number of car miles run	259,830
Average number of persons employed	48
If the company commenced operation during the year, give the date	
Average amount received from each passenger	.048
Amount of passenger earnings per mile of road	$31,348 33

Freight:

Number of Tons Freight earning revenue........
Number of tons freight carried per mile of road........
Average amount received for each ton of freight......
Average receipts per ton of freight per mile..............
Average rate of speed of passenger cars per hour........................
Average rate of speed of freight cars per hour..........................

Description of Equipment	No. of motor cars	Trailer cars	Official cars	Electric locomotives	Baggage and mail express cars	Cattle and box cars	Refrigerator cars	Platform cars	Coal and dump cars	Conductors' vans	Tool cars	Snow plows	Snow sweepers	Equipped with fenders	Equipped with stoves	Equipped with electric heaters
Box passenger cars	9	3	...	..	...	...	...	...	...	...	...	1	...	9	1	9
Open passenger cars	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses..........	
Carts and snow sleds..........	
Other railway rolling stock—Trolley wagon..........	1
Other highway vehicles..........	
Horses..........	
Other items of equipment—Ferry boat..........	1

DESCRIPTION OF RAILWAY OWNED AND OPERATED

RAILWAY OWNED, LEASED AND OPERATED (BY ELECTRIC POWER)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line.......	4.30	....	....	4.30	3.35
Length of second main track	..	.6190′ double	track	4.30	3.35
Total length of main track.	4.30	....	.....	4.30	3.35
Length of sidings, switches, etc	.38	....	.....	.38	.38
Total, computed as single track...............	4.68	....	....	4.68	3.73
Length of line under construction...............		....	....	....	....

DESCRIPTION OF FREIGHT CARRIED

DESCRIPTION OF ROAD BED, ETC.

Rails		Weight per yard		No. ties to mile	General remarks
Steel	Iron	Steel	Iron		
		80			3700′ on 6″ concrete base; balance on rock or cinder ballast.
		85		3,520	

Names of the several cities and towns in which the railways operated by the company are located: S. S. Marie Ferry Boat, operating between Ontario and Michigan, crossing St. Mary's River.

GRADE CROSSINGS WITH RAILROADS, ETC.

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (......in number), viz.:				
With C.P.R.		Interlocker	Steam	Electric
			1	1
No. junctions with other railways		1		
*No. of overhead bridges		1		
No. of highway crossings		1		
Height of overhead bridges above rail level		2216′		
Radius of sharpest curve		50′		
No. of feet per mile of heaviest gradient—5% gradient		20′		
Gauge of railway		4′ 8½″		
Width of devil strip		5′ 3″		
Total number of tracks at crossings				
Number of above crossings at which frogs are inserted in the tracks				

GENERAL REMARKS AND EXPLANATIONS

*Street Railway track crosses Algoma Central Rly Tracks on overhead bridge and heaviest gradient in street railway track occurs on approach on either side of this bridge.

SUMMARY OF ACCIDENTS TO PROPERTY

June 30, 1920

ACCIDENTS TO PERSONS

Killed and Injured	From causes beyond their own control		From their own misconduct or carelessness		Total	
	Killed	Injured	Killed	Injured	Killed	Injured
Passengers						
Employees		5				
Other persons						
Totals		5				

Wages Street Railway Co.'s or Radial Railways

	No. Employed	Average No. of Hours on Duty per Day	Wages per day		
			1st Yr.	2nd Yr.	3rd Yr.
Inspectors and repairmen	2	10	40	41	42
Conductors	12	10	41	42	43
Motormen	12	10	41	42	43
Starters					
Foremen	2	10	50c per hour		
Linemen					
Engineers					
Blacksmiths					
Firemen					
Electricians					
Armature winders	2	10	41	..	..
Machinists and Mechanics					
Car Cleaners					
Average number of employees	30				
Watchmen	1	12	36	..	..
Switchmen and crossing tenders	2	10	$95.00 per month		

Corporate Organization

Corporate name and address of the company:
The International Transit Company, Sault Ste. Marie, Ont.

Names and business address of principal officers:

President—James O. Heyworth, Harvester Building, Chicago, Ill.
1st Vice-President—Martin J. Insull, Edison Bldg., Chicago, Ill.
2nd Vice-President—John A. McPhail, Sault Ste. Marie, Ont.
Treasurer—Oliver E. McCormick, Edison Bldg., Chicago, Ill.
General Counsel—John A. McPhail, Sault Ste. Marie, Ont.
Auditor—James M. McNeil, Sault Ste. Marie, Ont.
General Manager—Albert E. Pickering, Sault Ste. Marie, Ont.
Superintendent—James Summerhayes, Sault Ste. Marie, Ont.

Name of officer and address to whom correspondence regarding this report should be addressed

J. M. McNeil, Auditor, Sault Ste. Marie, Ont.

Names and residence of Board of Directors:

James O. Heyworth, Chicago, Ill.
Martin J. Insull, Chicago, Ill.
John A. McPhail, Sault Ste. Marie, Ont.
Samuel Insull, Chicago, Ill.
Donald R. McLennon, Chicago, Ill.
James L. Martin, Chicago, Ill.
Stedman Buttrick, Boston, Mass.

ANNUAL REPORT OF THE
KINGSTON, PORTSMOUTH & CATARAQUI ELECTRIC RAILWAY COMPANY

For the Year Ending June 30, 1920

GENERAL INFORMATION

Name of municipality or municipalities in which railway operates: Kingston, Ont.
Name of company: Kingston, Portsmouth and Cataraqui Electric Railway Company.
Date of incorporation: February 10th, 1876.
Dates of subsequent legislation: 39 Vic.—74. 1893, chap. 91; 1895, chap 105; 1891 (1), chap. 61; 1904, chap. 79; 1906, chap. 11.
Date of expiry of franchise:
Amount paid to municipality per year per mile of track: None.
Further amounts, if any, paid to municipality by way of percentage earnings: None.
Total amount paid municipality during year for franchise: None.
Appraised value of plant and tracks for purposes of taxation: $25,000.00.
Total taxes paid during year to municipality: $1433.24.
Amount of aid received from municipality, if any: Exemption from taxes on all property.
Power consumed per car mile in kilowatt hours: Used exclusively for St. Rly. purposes.
Cost per horse power for motive power used in operating plant.
Cost of power per kilowatt per hour: 1 1-5 cts.
Cost of power per car mile: 2c per mile approximately.
Average speed of cars: 9 miles per hour.
State if power is purchased or generated by company: Purchased from the City.
State if power is generated by steam or water power: Steam.
Give number of power houses: 1—owned by the City of Kingston.

General Exhibit for the Year

Gross earnings from operation		$68,494 30
Operating expenses		60,960 33
Net earnings from operation		$7,533 97
Miscellaneous income:		
Rent, $850.57; Adv. Rec., $405.00; C.P.R., $220; Interest War Bonds, $943.05; L.O. Park, $225.03		
Total miscellaneous income		2,644 13
Gross income above operating expenses		$10,178.10

Charges upon income accrued during the year:

Interest on funded debt	$4,000 00	
Interest and discount on unfunded debts and loans		
Taxes, municipal		
Taxes, provincial		
Taxes, commutation		
Rentals of leased railways		
Payments to sinking and other special funds		
Reserve for damages	3,087 49	
Other deductions from income		
Total charges and deductions from income		$7,087 49

Net divisible income		$3,090 61
Dividends declared ....per cent. on $		
" ....per cent .on $		
Total dividends declared		....
Surplus or deficit for the year ending June 30, 1919		....
Amount of surplus or deficit, June 30, 1919		....
Credits to profit and loss account during the year		
Total credits		
Debits to profit and loss account during the year		
Total debits		
Net amount credited to profit and loss		....
Total surplus or deficit, June 30, 1919		$3,090 61

EARNINGS AND EXPENSES OF OPERATION

Earnings from operation

Receipts from passengers carried	$68,494 30
" carriage of mails	
" carriage of express and parcels	
" carriage of freight	
" tolls for use of tracks by other companies	
" rentals of buildings and other property—Rents	850 57
" Advertising in cars	405 00
" interest on deposits—C.P.R. stock	220 00
Other earnings from operation—Interest on war bonds	943 53
Lake and Park	225 03
Gross earnings from operation	$71,138 43

Expenses of Operation:

General Expenses:

Salaries of general officers and clerks and attendants	$4,088 50
General office expenes and supplies—Office expenses, $407.93; Postage, $41.00	448 93
Legal expenses	64 00
Insurance	610 89
Switching charges, if any	
Other general expenses—Expense, $535.94; Oil and grease, $96.14; Taxes, $1,433.24	2,065 32
Water and light, $140.96; Advertising, $199.95; Printing and Stationery, $173.80; Interest, $20.72	535 43
M. shop expenses, 35.25	35 25

Maintenance of roadbed and buildings:

Repair of roadbed and track—Ordinary repairs	13,002 66
Repair of electric line construction	966 93
Repair of buildings	51 35

Maintenance of equipment:

Repair of cars—Wages	8,056 65
Repair of electric equipment of cars	6,226 42
Repair of miscellaneous equipment	
Provender and stabling	

Transportation expenses:

Cost of electric motive power, $5,086.04; less power sold, $......; net	5,086 04
Wages and compensation of persons employed in conducting transportation	18,808 50
Removal of snow and ice	220 15
Damages for injuries to persons and property	282 69
Tolls for trackage over other railways	
Rentals of buildings and other property	
Other transportation expenses—Horse and rig, $195.62; Auto truck, $215.00	410 62
Total Operating Expenses	$60,960 33

PROPERTY ACCOUNTS—ADDITIONS AND DEDUCTIONS DURING THE YEAR

Additions to railway:

Extension of tracks (length..........feet)
New electric line construction (length..........feet)
Other additions to railway

Total additions to railway

Additions to equipment:

Additional cars (..........in number)
Electric equipment of same
Other additional rolling stock
Other additions to equipment

Total additions to equipment

Additions to land and buildings:

Additional land necessary for operation of railway
New electric power stations, including machinery, etc.
Additional equipment of power stations
Other new buildings necessary for operation of railway

Total additions to land and buildings

Additions to other permanent property:

....

Total additions to other permanent property

Total additions to Property Accounts
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts)

Total deductions from property accounts

Net addition to property accounts for the year

GENERAL BALANCE SHEET

ASSETS

Cost of railway:

Roadbed and tracks
Electric line construction, including poles, wiring, feeder lines, etc.
Interest accrued during construction of railway
Engineering and other expenses incident to construction
Other items of railway cost

Total cost of railway owned

Cost of equipment:

Passenger cars and other rolling stock
Electric equipment of same
Other items of equipment

Total cost of equipment owned

Cost of land and buildings:

Land necessary for operation of railway
Electric power stations, including equipment
Other buildings necessary for operation of railway

Total cost of land and buildings owned
Other permanent property

Total cost of other permanent property owned

Total permanent investments

Cash and current assets:		
Cash		
Bills and accounts receivable		
Sinking and other special funds		
Other cash and current assets		
Total cash and current assets		
Miscellaneous assets:		
Materials and supplies		
Other assets and property		
Total miscellaneous assets		
Profit and loss balance—deficit		
Total		....

The Company now operating this road acquired it when insolvent by purchasing the outstanding debts and stock. A financial re-organization was authorized and carried into effect pursuant to 6 Edw. VII., chap. III. Nothing was paid on bonded indebtedness until July 5th, 1906. The annual charge is $4,000.

LIABILITIES

Capital stock, common		$40,000 00
preferred		43,100 00
Total capital stock		83,100 00
Funded debt		
Real estate mortgages		100,000 00
Current liabilities:		
Loans and notes payable		
Audited vouchers and accounts		
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities		
Total current liabilities		
Accrued liabilities:		
Interest accrued and not yet due		
Taxes accrued and not yet due		
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		
Sinking and other special funds		
Total sinking and other special funds		
Profit and loss balance—surplus		
Total		....

CAPITAL STOCK—REAL ESTATE MORTGAGES

Capital stock:		
Capital stock authorized by law, common		
preferred		
Total capital stock authorized by law		
Capital stock authorized by votes of company, common		
preferred		
Total capital stock authorized by vote		
Capital stock issued and outstanding, common		$40,000 00
preferred		43,100 00
Total capital stock outstanding		83,100 00

Amount paid in on..........shares not yet issued		
on stock to be exchanged		
Scrip convertible into stock		
Other paid stock liability		
Total capital stock liability		
Number of shares issued and outstanding, common	400	
preferred	431	
Total number of shares outstanding	831	
Number of stockholders, common	20	
preferred	5	
Total number of stockholders	25	
Amount of stock held, common		
preferred		
Total stock held		

REAL ESTATE MORTGAGES

Description of mortgaged property	Rate of interest	Mortgage when due	Amount	Interest paid during the year
All to secure Bonds		5/7/26	$100,000.00	
Sec. 6—Edw. VII., chap. III	4%			
Totals				

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, etc.:

Number of passengers paying revenue carried during the year	1,072,824
Number carried per mile of main railway track operated	134,103
Number of car miles run	199,680
Average number of persons employed	19
If the Company commenced operation during the year, give the date	
Average amount received from each passenger—revenue passenger	6.03c
Amount of passenger earnings per mile of road	

Freight:

Number of tons freight earning revenue	
Number of tons freight carried per mile of road	
Average amount received for each ton of freight	
Average receipts per ton of freight per mile	
Average rate of speed of passenger cars per hour	9 miles
Average rate of speed of freight cars per hour	

Description of equipment	No. of motor cars	Trailer cars	Official cars	Electric locomotives	Baggage and mail express cars	Cattle and box cars	Refrigerator Cars	Platform cars	Coal and dump cars	Conductors' vans	Wort cars	Snow plows	Snow sweepers	Equipped with fenders	Equipped with stoves	Equipped with electric heaters
Box passenger cars	8										1	1	2	all		all
Open passenger cars	12															

Miscellaneous Equipment

	Total Number
Barges and omnibuses	
Carts and snow sleds	
Other railway rolling stock	
Other highway vehicles	
Horses	
Other items of equipment	

DESCRIPTION OF RAILWAY OWNED AND OPERATED

Railway Owned, Leased and Operated (by Electric Power)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	8				
Length of second main track					
Total length of main track					
Length of sidings, switches, etc.					
Total, computed as single track					
Length of line under construction					

Description of Freight Carried

DESCRIPTION OF ROAD BED, ETC.

Rails		Weight per yard		No. ties per mile	General remarks
Steel	Iron	Steel	Iron		
Steel	....	56—60	....	....	....
....	....	90 lbs.	....	2,600	....
....	....	T. rails	....	....	....
....	....	....	....	....	....

Names of the several cities and towns in which the railways operated by the Company are located: City of Kingston, Village of Portsmouth.

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks at Crossing	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (......in number), viz.:				
With Kingston-Pembroke Railway, at cor. of Montreal and Rideau Sts., in the city of Kingston....................	....	Derails	One	....
No. junctions with other railways.........	....	....	....	....
No. of overhead bridges..................	....	....	....	....
No. of highway crossings.................	....	....	....	....
Height of overhead bridges above rail level	....	....	....	....
Radius of sharpest curve.................	45ft.	....	....	....
No. of feet per mile of heaviest gradient. .	5%	....	....	....
Gauge of railway........................	4ft. 8½ins.	....	....	....
Width of devil strip.....................	4′ 4″x 4′ 8½″	....	....	....
Total number of tracks at crossings...	....	....	One	....

Number of above crossings at which frogs are inserted in the tracks......................

SUMMARY OF ACCIDENTS TO PROPERTY

....

....

....

Total amount paid during year for damages caused by accidents $282.69.

ACCIDENTS TO PERSONS

Killed and Injured	From causes beyond their own control		From their own misconduct or carelessness		Total	
	Killed	Injured	Killed	Injured	Killed	Injured
Passengers..........................	....	....	....	2	....	....
Employees...........................	....	....	....	....	....	....
Other persons.......................	....	....	....	....	....	....
Totals..............................	....	....	....	2	....	....

WAGES STREET RAILWAY CO.'S OR TADIAL RAILWAYS

	No. Employed	Average No. of hours on duty per Day	Wages per day		
			1st 6 mos.	2nd 6 mos.	2nd Year
25c per day increase from April 10th, 1920.		Hours			Day
Inspectors—All year	1	10	....	....	$3.70
Conductors—3 mos. in year — 9 mos. in year —	12/6	10	3.25	3.30	3.35
Motormen —3 mos. in year — 9 mos. in year —					
Starters	....	....	....	....	....
Roadmen	....	10	....	....	3.50
Linemen	2	10	....	....	3.90
Engineers	....	....	....	....	....
Blacksmiths	1	10	....	....	5.00
Firemen	....	....	....	....	....
Electricians—Carpenter	....	....	....	....	5.00
Carpenter's helper	....	....	....	....	3.50
Armature winders	....	....	....	....	....
Machinists and Mechanics	....	....	....	....	....
Car Cleaners	....	....	....	....	....
Average number of employees	....	....	....	....	....
Watchmen	1	12	....	....	21.60
Switchmen and crossing tenders	....	....	....	....	7 nights

CORPORATE ORGANIZATION

Corporate name and address of the company:

Kingston, Portsmouth and Cataraqui Electric Railway Company, Kingston, Ont.

Names and business address of principal officers:

President—Henry W. Richardson, Kingston, Ont. (deceased).

Vice-President—Robt. V. Rogers, Kingston, Ont. (deceased).

Treasurer and Secretary—William N. Nickle, Kingston, Ont.

Superintendent—Hugh C. Nickle.

Name of officer and address to whom correspondence regarding this report should be addressed

Wm. N. Nickle, Secretary and Treasurer, Kingston, Ont.

Names and residence of Board of Directors:

Henry W. Richardson, Kingston, Ont.

Robt. V. Rogers (deceased), Kingston, Ont.

Wm. N. Nickle, Kingston, Ont.

Hugh C. Nickle, Kingston, Ont.

Capt. Geo. Richardson (killed in action).

Jas. Richardson, Kingston, Ont.

W. D. Ross, Toronto, Ont.

ANNUAL REPORT OF THE

KITCHENER AND WATERLOO STREET RAILWAY COMPANY

FOR THE YEAR ENDING DECEMBER 31ST, 1920

GENERAL INFORMATION

Name of municipality or municipalities in which railway operates: City of Kitchener, and Town of Waterloo.
Name of company: Kitchener and Waterloo Street Railway.
Date of incorporation: Purchased from Company by City of Kitchener on May 1st, 1907.
Dates of subsequent legislation:
Date of expiry of franchise:
Amount paid to municipality per year per mile of track:
Further amounts, if any, paid to municipality by way of percentage earnings, 75% on $4,048.14 paid to City of Kitchener and 25% of $4,048.14 paid to Town of Waterloo.
Total amount paid municipality during year for franchise—Kitchener $3,036.11
Waterloo 1,012.03
$4,048.14
Appraised value of plant and tracks for purposes of taxation:
Total taxes paid during year to municipality: $332.70.
Amount of aid received from municipality, if any: None.
Power consumed per car mile in kilowatt hours: 4.7 K.W.H.
Cost per horse power for motive power used in operating plant: $27.69.
Cost of power per kilowatt per hour: 1.07c.
Cost of power per car mile: 4.9c.
Average speed of cars: 12 miles per hour.
State if power is purchased or generated by company: Purchased.
State if power is generated by steam or water power: Ontario Hydro Power.
Give number of power houses: One.

GENERAL EXHIBIT FOR THE YEAR

Gross earnings from operation		$96,165 23
Operating expenses		71,965 21
Net earnings from operation		$24,200 02
Miscellaneous income		
Total miscellaneous income		....
Gross income above operating expenses		....
Charges upon income accrued during the year:		
Interest on funded debt	$6,759 61	
Interest and discount on unfunded debts and loans		
Taxes, municipal	332 70	
Taxes, provincial		
Taxes, commutation		
Rentals of leased railways		
Annual payment of debenture principal	5,261 07	
Depreciation	8,691 60	
Payments to sinking and other special funds		
Other deductions from income		
Total charges and deductions from income		21,044 98
Net divisible income		....
Dividends declared ....per cent. on $		
........per cent. on		
Total dividends declared		....
Surplus or deficit for the year ending June 30, 1920		....

Amount of surplus or deficit, June 30, 1920		
Credits to profit and loss account during the year		
Total credits		
Debits to profit and loss account during the year		
Total debits		
Net amount credited to profit and loss		....
Total surplus or deficit, December 31, 1920		$3,155 04

Earnings and Expenses of Operation

Earnings from Operation:		
Receipts from passengers carried		$84,984 13
" carriage of mails		2,909 05
" carriage of express and parcels		163 98
" carriage of freight		
" tolls for use of tracks by other companies		7,008 70
" rentals of buildings and other property		58 25
" advertising in cars		869 42
" interest on deposits		171 70
Other earnings from operation		
Gross earnings from operation		$96,165 23
Expenses of Operation:		
General expenses:		
Salaries of general officers and clerks and attendants		3,574 31
General office expenses and supplies		1,006 71
Legal expenses		216 38
Insurance		2,249 61
Switching charges, if any		
Other general expenses—Injuries and damages		54 44
Maintenance of roadbed and buildings:		
Repair of roadbed and track		3,681 77
Repair of electric line construction		231 46
Repair of buildings		16 80
Maintenance of equipment:		
Repair of cars		2,690 19
Repair of electric equipment of cars		4,673 19
Repair of miscellaneous equipment—Tools		180 27
Barn expense	$602 92	
Car service expense	2,317 05	
		2,919 97
Transportation expenses:		
Cost of electric motive power, $........; less power sold, $......; net		11,832 38
Wages and compensation of persons employed in conducting transportation		33,135 29
Removal of snow and ice		562 65
Damages for injuries to persons and property		
Tolls for trackage over other railways		
Rentals of buildings and other property—Rly. crossing expense and watchman		4,223 56
Other transportation expenses—Utility equipment		716 23
Total operating expenses		$71,965 21

Property Accounts—Additions and Deductions during the Year

Additions to railway:		
Extension of tracks (length 4805 feet) and part cost of diamond	$5,115 51	
New electric line construction (length 13935 feet)	3,139 15	
Other additions to railway		
Total additions to railway		$8,254 66
Additions to equipment:		
Additional cars (changed to pay as you enter)	2,332 92	
Electric equipment of same		
Other additional rolling stock		
Other additions to equipment		
Total additions to equipment		2,332 92

Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc.		
Additional equipment of power stations	17 18	
Other new buildings necessary for operation of railway		
Total additions to land and buildings		17 18
Additions to other permanent property		
Total additions to other permanent property		
Total additions to property accounts		....
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts)		
Total deductions from property accounts		
Net addition to property accounts for the year		$10,604 76

GENERAL BALANCE SHEET

ASSETS

Cost of railway:		
Roadbed and tracks	$93,508 94	
Electric line construction, including poles, wiring, feeder lines, etc.	12,329 00	
Interest accrued during construction of railway		
Engineering and other expenses incident to construction		
Other items of railway cost		
Total cost of railway owned		$105,837 94
Cost of equipment:		
Passenger cars and other rolling stock	68,592 73	
Electric equipment of same	22,049 92	
Other items of equipment		
Total cost of equipment owned		90,642 65
Cost of land and buildings:		
Land necessary for operation of railway	3,758 84	
Electric power stations, including equipment	16,267 93	
Other buildings necessary for operation of railway		
Total cost of land and buildings owned		20,026 77
Other permanent property		
Total cost of other permanent property owned		
Total permanent investments		....
Cash and current assets:		
Cash	1,120 53	
Bills and accounts receivable	2,049 19	
Sinking and other special funds		
Other cash and current assets		
Total cash and current assets		3,169 72
Miscellaneous assets:		
Materials and supplies—Inventories	13,195 96	
Other assets and property		
Total miscellaneous assets		13,195 96
Profit and loss balance—deficit		....
Tota		$232,873 04

LIABILITIES—DECEMBER 31, 1920

Capital stock, common		
preferred		
Total capital stock		
Funded debt		129,865 01
Real estate mortgages		

Current liabilities:		
Loans and notes payable		
Audited vouchers and accounts	2,757 31	
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities		
Bank overdraft	320 20	
Total current liabilities		3,077 51
Accrued liabilities:		
Interest accrued and not yet due	3,342 74	
Taxes accrued and not yet due		
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		3,342 74
Sinking and other special funds:		
Debenture paid	$46,734 99	
Balance—depreciation account	46,697 75	
Total sinking and other special funds		93,432 74
Profit and loss balance—surplus		3,155 04
Total		$232,873 04

CAPITAL STOCK—REAL ESTATE MORTGAGES

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, etc.:	
Number of passengers paying revenue carried during the year	2,065,539
Number carried per mile of main railway track operated	441,351
Number of car miles run	204,811
Average number of persons employed	23
If the Company commenced operation during the year, give the date	
Average amount received from each passenger	4.11c
Amount of passenger earnings per mile of road	$18,159.00
Freight:	
Number of tons freight earning revenue	
Number of tons freight carried per mile of road	
Average amount received for each ton of freight	
Average receipts per ton of freight per mile	
Average rate of speed of passenger cats per hour	
Average rate of speed of freight cars per hour	

Description of equipment	No. of motor cars	Trailer cars	Official cars	Electric locomotives	Baggage and mail express cars	Cattle and box cars	Refrigerator cars	Platform cars	Coal and dump cars	Conductors' vans	Tool cars	Snow plows	Snow sweepers	Equipped with fenders	Equipped with stoves	Equipped with electric heaters
Open passenger cars	10	1	...	...	...	...	...	...	...	...	1	...	1	...	...	...
Box passenger cars	2	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses...	
Carts and snow sleds...	
Other railway rolling stock..	
Other highway vehicles...	
Horses...	
Other items of equipment...	

DESCRIPTION OF RAILWAY OWNED AND OPERATED

RAILWAY OWNED, LEASED AND OPETATED (BY ELECTRIC POWER)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line.............	3.28	.91	....	4.19	3.28
Length of second main track.......	1.40	....	....	1.40	1.40
Total length of main track..........	4.68	....	....	5.59	4.68
Length of sidings, switches, etc.....	.38	....	....	.38	.38
Total, computed as single track..	5.06	.91	....	5.97	5.06
Length of line under construction...	....	....	....	....	....

DESCRIPTION OF FREIGHT CARRIED

....

....

....

DESCRIPTION OF ROAD BED, ETC.

Rails		Weight per yard		No. ties to mile	General remarks
Steel	Iron	Steel	Iron		
All	65.80	....	....	2,640	....
....	....	....	....	....	....
....	....	....	....	....	....

Names of the several cities and towns in which the railways operated by the Company are located: **City of Kitchener, Town of Waterloo.**

GRADE CROSSINGS WITH RAILROADS, ETC.

Grade Crossings with Railroads	Unprotected	How Protected	No. of tracks at Crossing	
			Railroad Tracks	Railway Tracks
With G.T.R., at King St., Kitchener		Interlocker	3	1
With G.T.R., Waterloo		Interlocker	2	1
With Grand River Ry. at Wilmot Street, Kitchener	Yes		1	1
No. junctions with other railways				
No. of overhead bridges	2			
No. of highway crossings	None			
Height of overhead bridges above rail level	None			
Radius of sharpest curve	50ft.			
No. of feet per mile of heaviest gradient	3.9%			
Gauge of railway	4ft. 8½″			
Width of devil strip	5ft. 2″			
Total number of tracks at crossings				

Number of above crossings at which frogs are inserted in the tracks: 3

SUMMARY OF ACCIDENTS TO PROPERTY

ACCIDENTS TO PERSONS

WAGES STREET RAILWAY CO.'S OR RADIAL RAILWAYS

	No. Employed	Average No. of hours on Duty per Day	Wages per day		
			1st Yr.	2nd Yr.	3rd Yr.
Inspectors					
Conductors	8	10	$3.50	$4.00	$4.50
Motormen	8	10	3.50	4.00	4.50
Starters					
Roadmen	2	10			4.50
Linemen					
Engineers	1		Per month		208.33
Blacksmiths	1	10			5.50
Firemen					
Electricians					
Armature winders					
Machinists and mechanics	2	10			4.50-5.00
Car cleaners	1	10			3.50
Average number of employees					
Watchmen	23				
Switchmen and crossing tenders					

CORPORATE ORGANIZATION

Corporate name and address of the company:

The Kitchener Light Commissioners, 169 King Street West, Kitchener, Ont.

Names and business address of principal officers:

Chairman—George Lippert, 222 Louisa Street, Kitchener, Ont.
Vice-Chairman—A. R. Lang, 337 King St. West, Kitchener, Ont.
Treasurer—G. H. Clarke, 169 King Street West, Kitchener, Ont.
Clerk of Corporation—H. J. Sims, 77 King Street West, Kitchener, Ont.
General Counsel—J. M. Scully, F.C.A., 9 Foundry Street South, Kitchener, Ont.
General manager and superintendent—V. S. McIntyre, 169 King St. W., Kitchener, Ont.

Name of officer and address to whom correspondence regarding this report should be addressed:
G. H. Clarke, Secretary-Treasurer, 169 King Street West.

Names and residence of Board of Directors:

Geo. Lippert, Sr., Kitchener, Ont.
A. R. Lang, Kitchener, Ont.
C. H. Doerr, Kitchener, Ont.
Carl Kranz, Kitchener, Ont.

ANNUAL REPORT OF THE

LAKE HURON AND NORTHERN ONTARIO RAILWAY COMPANY

FOR THE YEAR ENDING JUNE 30, 1920

GENERAL INFORMATION

Name of municipality or municipalities in which railway operates: Plummer, Plummer Additional and Aberdeen.

Name of company: Lake Huron and Northern Ontario Railway Company.

Date of incorporation: 1899.

Dates of subsequent legislation: April 1901, 1902; May 1903, 1905, 1906; April 1909; March 1910; April 1912, 1913; May 1913, 1915, 1919; July 1920.

Date of expiry of franchise: 1922.

Amount paid to municipality per year per mile of track:

Further amounts, if any, paid to municipality by way of percentage earnings, % on $:

Total amount paid municipality during year for franchise:

Appraised value of plant and tracks for purposes of taxation:

Total taxes paid during year to municipality: $276.50.

Amount of aid received from municipality, if any:

Power consumed per car mile in kilowatt hours:

Cost per horse power for motive power used in operating plant:

Cost of power per kilowatt per hour:

Cost of power per car mile:

Average speed of cars:

State if power is purchased or generated by company:

State if power is generated by steam or water power:

Give number of power houses:

GENERAL EXHIBIT FOR THE YEAR

Gross earnings from operation		$10,874 18
Operating expense		10,424 89
Net earnings from operation		$449 29
Miscellaneous income		
Total miscellaneous income		
Gross income above operating expenses		....
Charges upon income accrued during the year:		
Interest on funded debt		
Interest and discount on unfunded debts and loans		
Taxes, municipal	$276 80	
Taxes, provincial	150 00	
Taxes, commutation		
Rentals of leased railways		
Payments to sinking and other special funds		
Other deductions from income		
Total charges and deductions from income		426 80
Net divisible income		....
Dividends declared ....per cent. on $		
........per cent. on $		
Total dividends declared		
Surplus or deficit for the year ending June 30, 1920		
Amount of surplus or deficit June 30, 1920		
Credits to profit and loss account during the year		
Total credits		
Debits to profit and loss account during the year		
Total debits		
Net amount credited to profit and loss		
Total surplus or deficit June 30, 1920		22 49

EARNINGS AND EXPENSES OF OPERATION

Earnings from operation:	
Receipts from passengers carried	
" carriage of mails	
" carriage of express and parcels	
" carriage of freight	$10,874 18
" tolls for use of tracks by other companies	
" rentals of buildings and other property	
" advertising in cars	
" interest on deposits	
Other earnings from operation	
Gross earnings from operation	$10,874 18
Expenses of operation:	
General expenses:	
Salaries of general officers and clerks and attendants	2,700 00
General office expenses and supplies	50 99
Legal expenses	8 23
Insurance	
Switching charges, if any	
Other general expenses—Fuel and oil	1,394 14
Maintenance of roadbed and buildings:	
Repair of roadbed and track	103 20
Repair of electric line construction	
Repair of building	

Maintenance of equipment:		
Repair of cars		
Repair of electric equipment of cars		
Repair of miscellaneous equipment		282 23
Provender and stabling		
Transportation expenses:		
Cost of electric motive power, $......; less power sold, $......; net		
Wages and compensation of persons employed in conducting transportation		5,886 10
Removal of snow and ice		
Damages for injuries to persons and property		
Tolls for trackage over other railways		
Rentals of buildings and other property		
Other transportation expenses		
Total operating expenses		$10,424 89

Property Accounts—Additions and Deductions During the Year

Additions to railway:		
Extension of tracks (length........feet)		
New electric line construction (length........feet)		
Other additions to railway		
Total additions to railway		....
Additions to equipment:		
Additional cars (........in number)		
Electric equipment of same		
Other additional rolling stock		
Other additions to equipment		
Total additions to equipment		....
Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc.		
Additional equipment of power stations		
Other new buildings necessary for operation of railway		
Total additions to land and buildings		....
Additions to other permanent property		
Total additions to other permanent property		
Total additions to property accounts		....
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts)		
Total deductions from property accounts		
Net addition to property accounts for the year		....

General Balance Sheet

Assets

Cost of railway:		
Roadbed and tracks	$595,000 00	
Electric line construction, including poles, wiring ,feeder lines, etc.		
Interest accrued during construction of railway		
Engineering and other expenses incident to construction		
Other items of railway cost		
Total cost of railway owned		$595,000 00
Cost of equipment:		
Passenger cars and other rolling stock	10,000 00	
Electric equipment of same		
Other items of equipment		
Total cost of equipment owned		10,000 00

Cost of land and buildings:		
Land necessary for operation of railway	4,000 00	
Electric power stations, including equipment		
Other buildings necessary for operation of railway		
Total cost of land and buildings owned		4,000 00
Other permanent property		
Total cost of other permanent property owned		
Total permanent investments		$609,000 00
Cash and current assets:		
Cash		
Bills and accounts receivable		
Sinking and other special funds		
Other cash and current assets		
Total cash and current assets		....
Miscellaneous assets:		
Materials and supplies		
Other assets and property		
Total miscellaneous assets		
Profit and loss balance—deficit		....
Total		$609,000 00

LIABILITIES

Capital stock, common	$595,000 00	
preferred		
Total capital stock		$595,000 00
Funded debt		595,000 00
Real estate mortgages		....
Current liabilities:		
Loans and notes payable		
Audited vouchers and accounts		
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities	21,646 21	
Total current liabilities		21,646 21
Accrued liabilities:		
Interest accrued and not yet due		
Taxes accrued and not yet due		
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		
Sinking and other special funds		
Total sinking and other special funds		
Profit and loss balance—surplus		....
Total		$1,221,646 21

NOTE—$464,000 Capital stock —
505,000 Bonds — In hands of Province for financing road.

CAPITAL STOCK—REAL ESTATE MORTGAGES

CAPITAL STOCK

Capital stock authorized by law, common	$12,000,000 00	
preferred		
Total capital stock authorized by law	12,000,000 00	
Capital stock authorized by votes of company, common	595,000 00	
preferred		
Total capital stock authorized by vote	595,000 00	
Capital stock issued and outstanding, common		$515,000
preferred		
Total capital stock outstanding		
Amount paid in on........shares not yet issued		
Amount paid in on stock to be exchanged		
Scrip convertible into stock		
Other paid stock liability		
Total capital stock liability		
Number of shares issued and outstanding, common		
preferred		
Total number of shares outstanding		
Number of stockholders, common	134	
preferred		
Total number of stockholders		
Amount of stock held, common		
preferred		
Total stock held		

REAL ESTATE MORTGAGES

....

....

....

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

Funded Debt—Description of Bonds, etc.	Rate of Interest	Day of Maturity	Amount Outstanding	Interest paid during the year
30 Year Gold Bond, due April 1934 for 35,000 per mile of road interest 5%				

SINKING AND OTHER SPECIAL FUNDS

....

....

....

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, etc.:

Number of passengers paying revenue carried during the year	
Number carried per mile of main railway track operated	
Number of car miles run	
Average number of persons employed	
If the company commenced operation during the year, give the date	
Average amount received from each passenger	No Record
Amount of passenger earnings per mile of road	

Freight:

Number of tons freight earning revenue..
Number of tons rfeight carried per mile of road...............................
Average amount received for each ton of freight...............................
Average receipts per ton of freight per mile..................................
Average rate of passenger cars per hour.......................................
Average rate of speed of freight cars per hour................................

DESCRIPTION OF EQUIPMENT

Box passenger Cars.. 1
Open passenger Cars.......................1 box car, 8 flat cars, 1 steam locomotive....

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses	
Carts and snow sleds	
Other railway rolling stock	None
Other highway vehicles	
Horses	
Other items of equipment	

DESCRIPTION OF RAILWAY OWNED AND OPERATED

RAILWAY OWNED, LEASED AND OPERATED (BY ELECTRIC POWER)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	15				15
Length of second main track	2				2
Total length of main track	17				17
Length of sidings, switches, etc.	3				3
Total, computed as single track	20				20
Length of line under construction, contract	125				

DESCRIPTION OF FREIGHT CARRIED

Flour		Lumber		Fuel		All other Articles	Total Tonnage	Remarks
Bbls.	Tons	Ft.,B.M.	Tons	Cords	Tons			
3,500		120,000		210	5,500	Ore & coal		

DESCRIPTION OF ROAD BED, ETC.

Rails		Weight per yard		No. Ties to mile	General remarks
Steel	Iron	Steel	Iron		
		56		2,600	

Names of the several cities and towns in which the railways operated by the company are located: Bruce Mines, Rydal Bank.

GRADE CROSSINGS WITH RAILROADS, ETC.

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks at Crossing	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (one in number), viz.:				
With C.P.R. "Soo" Line		Interlocking plant		
No. junctions with other railways				
No. of overhead bridges				
No. of highway crossings	16			
Height of overhead bridges above rail level				
Radius of sharpest curve	8			
No. of feet per mile of heaviest gradient	2%			
Gauge of railway	4.8½			
Width of devil strip				
Total number of tracks at crossings				

Number of above crossings at which frogs are inserted in the tracks........................

SUMMARY OF ACCIDENTS TO PROPERTY

ACCIDENTS TO PERSONS

WAGES STREET RAILWAY CO.'S OR RADIAL RAILWAYS

CORPORATE ORGANIZATION

Corporate name and address of the company:
The Lake Huron and Northern Ontario Railway Company, Bruce Mines, Ont.

Names and business address of principal officers:

President—D. G. Curtis, Erie, Pa.
Vice-President—H. Appleton, Bruce Mines, J. H. Maclean, Sault Ste. Marie.
Treasurer—J. H. McCaul.
General Counsel—Malone, Malone and Long.
General Manager—H. Appleton.

Name of officer, and address, to whom correspondence regarding this report should be addressed:
J. H. MacCaul, Secretary, Sault Ste. Marie.

ANNUAL REPORT OF THE LONDON STREET RAILWAY COMPANY

For the Year Ending June 30, 1920

GENERAL INFORMATION

Name of municipality or municipalities in which railway operates: City of London.
Name of company: The London Street Railway Company.
Date of incorporation: 1873—March 29th.
Dates of subsequent legislation: 1889, cap. 79; 1894, cap. 89; 1895, cap. 105; 1897, cap. 67; 1899, cap. 97; 1902, cap. 82; 1905, cap. 98.
Date of expiry of franchise: March 8th, 1925.
Amount paid to municipality per year per mile of track: Nil.
Further amounts, if any, paid to municipality by way of percentage earnings, % on $:
Total amount paid municipality during year for franchise: Nil.
Appraised value of plant and tracks for purposes of taxation:
Total taxes paid during year to municipality: $7,116.60.
Amount of aid received from municipality, if any: Nil.
Power consumed per car mile in kilowatt hours: 4,171,880 K.W. Hrs.—2.24 K.W. Hrs.
Cost per horse power for motive power used in operating plant: $31.00 H.P.
Cost of power per kilowatt per hour: .83 cents.
Cost of power per car mile: $1.86 cents.
Average speed of cars: Nine miles per hour.
State if power is purchased or generated by company: Purchased Hydro Power.
State if power is generated by steam or water power: No.
Give number of power houses: One—Dismantled.

General Exhibit for the Year

Gross earnings from operation (See note)			$536,054 76
Operating expenses			454,877 33
Net earnings from operation			81,177 43
Miscellaneous income			
Total miscellaneous income			
Gross income above operating expenses			81,177 43
Charges upon income accrued during the year:			
Interest on funded debt		$26,543 17	
Interest and discount on unfunded debts and loans		1,582 35	
Taxes, municipal	$7,116 60		
Taxes, provincial	1,040 00		
Taxes, commutation		8,156 60	
Rentals of leased railways			
Payments to sinking and other special funds			
Bond redemption, May 6 to June 30	5,516 12		
		5,516 12	
Other deductions from income			
Depreciation to May 5th, 1920	25,349 72		
Total charges and deductions from income		25,349 72	
Total charges and deductions from income			67,147 96
Net divisible income			$14,029 47
Dividends declared .... per cent. on $		(See note)	
.... per cent. on $		re increased fares).	
Total dividends declared			....
Surplus or deficit for the year ending June 30, 1920			$14,029 47
Amount of surplus or deficit June 30, 1920			123,396 45
			$137,425 92

Credits to profit and loss account during the year—wages		5 90	
1918 Reserves adjusted		17,635 68	
1919 Reserves adjusted		5,771 66	
Total credits		23,413 24	
Debits to profit and loss account during the year:			
War taxes paid	$11,004 54		
Depreciation adjusted	59,745 93		
Total debits		70,750 47	
Net amount debited to profit and loss			47,337 23
Total surplus or deficit June 30, 1920			$90,088 69

NOTE—Increased fares in effect July 11, 1919, to October 26, 1919, provided $17,649.20 increase in revenue.

Earnings and Expenses of Operation

Earnings from operation:	
Receipts from passengers carried—See note re increased fares, page 3	$529,085 38
“ carriage of mails	1,996 42
“ carriage of express and parcels	
“ carriage of freight	
“ tolls for use of tracks by other companies	
“ rentals of buildings and other property	301 00
“ advertising in cars	3,436 92
“ interest on deposits and accounts	152 77
Other earnings from operation—Chartered cars	898 08
Miscellaneous sources	184 19
Gross earnings from operation	$536,054 76
Expenses of operation:	
General expenses:	
Salaries of general officers and clerks and attendants	13,392 68
General office expenses and supplies	1,247 73
Legal expenses	1,925 00
Insurance	2,627 90
Switching charges, if any	
Other general expenses—Storeroom expense	2,354 84
Miscellaneous general expenses	14,449 95
Maintenance of roadbed and buildings:	
Repair of roadbed and track	31,378 40
Repair of electric line construction	7,058 01
Repair of buildings	1,653 09
Maintenance of equipment:	
Repair of cars	32,938 97
Repair of electric equipment of cars	20,805 36
Repair of miscellaneous equipment	5,392 06
Provender and stabling	
Transportation expenses:	
Cost of electric motive power, $......; less power sold, $......; net	34,663 50
Wages and compensation of persons employed in conducting transportation	239,830 32
Removal of snow and ice	2,500 00
Damages for injuries to persons and property	24,692 22
Tolls for trackage over other railways	
Rentals of buildings and other property	
Other transportation expenses:	
Miscellaneous car service expenses	13,617 03
Signal and interlocker and other trans.	4,349 94
Total operating Expenses	$454,877 33

PROPERTY ACCOUNTS—ADDITIONS AND DEDUCTIONS DURING THE YEAR

Additions to railway:		
Extension of tracks (length........feet)		
New electric line construction (length........feet)		
Other additions to railway		
Renewals and paving	6,848 32	
Total additions to railway		6,848 32
Additions to equipment:		
Additional cars (......in number)		
Electric equipment of same		
Other additional rolling stock		
Other additions to equipment	334 86	
Total additions to equipment		334 86
Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc.		
Additional equipment of power stations		
Other new buildings necessary for operation of railway	211 23	
Total additions to land and buildings		211 23
Additions to other permanent property		
Total additions to other permanent property		....
Total additions to property accounts		7,394 41
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts):		
Road and track	3,608 36	
Power plant	21 00	
Total deductions from property accounts		3,629 36
Net addition to property accounts for the year		$3,765 05

GENERAL BALANCE SHEET

ASSETS

Cost of railway:		
Roadbed and tracks	$814,136 08	
Electric line construction, including poles, wiring, feeder lines, etc.	86,404 91	
Interest accrued during construction of railway	70,937 50	
Engineering and other expenses incident to construction		
Other items of railway cost		
Total cost of railway owned		$971,478 49
Cost of equipment:		
Passenger cars and other rolling stock	179,633 51	
Electric equipment of same	103,427 81	
Other items of equipment—Miscellaneous equipment	40,264 91	
Miscellaneous equipment	6,134 70	
Total cost of equipment owned		329,460
Cost of land and buildings:		
Land necessary for operation of railway and buildings	94,785 16	
Electric power stations, including equipment	102,974 97	

Other buildings necessary for operation of railway		
Total cost of land and buildings owned		197,760 13
Other permanent property	7,110 97	
Total cost of other permanent property owned		7,110 97
Total permanent investments		$1,505,810 52
Less depreciation		226,736 76
		1,279,073 76
Cash and current assets:		
Cash	$18,765 01	
Bills and accounts receivable	4,202 16	
Sinking and other special funds		
Other cash and current assets—Prepaid insurance	1,323 15	
5% Bonds in Treasury	6,000 00	
Total cash and current assets		30,290 32
Miscellaneous assets:		
Materials and supplies	31,592 38	
Other assets and property		
Total miscellaneous assets		31,592 38
Profit and loss balance—deficit		
Total		$1,340,956 46

LIABILITIES

Capital stock, common		$637,480 00
preferred		
Total capital stock		$637,480 00
Funded debt—$531,000 c/s, plus $6,000 Treasury		537,600 00
Real estate mortgages		
Current liabilities:		
Loans and notes payable	$12,000 00	
Audited vouchers and accounts	17,569 63	
Salaries and wages	14,115 61	
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities		
Suspense account	996 62	
Outstanding tickets	16,526 00	
Total current liabilities		61,207 86
Accrued liabilities:		
Interest accrued and not yet due	8,401 17	
Taxes accrued and not yet due	1,262 62	
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		9,663 79
Sinking and other special funds		
Bond redemption reserve	5,516 12	
Total sinking and other special funds		5,516 12
Profit and loss balance—surplus—Company's surplus	$89,782 73	
Ont. Ry. and Mun. Board	305 96	
		90,088 69
Total		$1,340,956 46

CAPITAL STOCK—REAL ESTATE MORTGAGES

Capital stock:

Capital stock authorized by law, common		$750,000 00	
preferred			
Total capital stock authorized by law		750,000 00	
Capital stock authorized by votes of company, common			
preferred			
Total capital stock authorized by vote			
Capital stock issued and outstanding, common			$637,480 00
preferred			
Total capital stock outstanding			$637,480 00
Amount paid in on........shares not yet issued			
Amount paid in on stock to be exchanged			
Scrip convertible into stock			
Other paid stock liability			
Total capital stock liability			$637,480 00
Number of shares issued and outstanding, common	15,937		
preferred			
Total number of shares outstanding	15,937		
Number of stockholders, common			
preferred			
Total number of stockholders			
Amount of stock held, common		637,480 00	
preferred			
Total stock held		$637,480 00	

REAL ESTATE MORTGAGES

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

Funded Debt—Description of Bonds, etc.	Rate of Interest	Day of Maturity	Amount Outstanding	Interest paid during the year
First Mortgage 5% Gold Bonds	5%	March 8 1925	$531,000 00	$26,550 00
Totals				

SINKING AND OTHER SPECIAL FUNDS

Amount June 30, 1919—Depreciation	$149,141 11	
Injuries and damages	6,197 42	
Road track	8,379 27	
Equipment	2,340 65	
Total, June 30, 1919		$166,058 45
Additions during the year—Depreciation	$85,095 65	
Injuries and damages	3,281 74	
Road and track	6,041 92	
Equipment	17,393 86	
Total including additions	$111,813 17	
		$277,871 62
Deductions during the year—Depreciation	$7,500 00	
Injuries and damages	9,479 16	
Road track	14,421 19	
Equipment	19,734 51	
	51,134 86	
Total sinking and other special funds June 30, 1920		$226,736 76

VOLUME OF TRAFFIC, ETC.

Volume of Traffic, etc.:	
Number of passengers paying revenue carried during the year	13,728,331
Number carried per mile of main railway track operated	
Number of car miles run	1,861,916
Average number of persons employed	
If the company commenced operation during the year, give the date	
Average amount received from each passenger	3.85 cents
Amount of passenger earnings per mile of road	
Freight:	
Number of tons freight earning revenue	
Number of tons freight carried per mile of road	
Average amount received for each ton of freight	
Average receipts per ton of feight per mile	None
Average rate of speed of passenger cars per hour	9 miles
Average rate of speed of freight cars per hour	None

Description of Equipment	No. of motor cars	Trailer cars	Official cars	Electric locomotives	Baggage and mail express cars	Cattle and box cars	Refrigerator cars	Platform cars	Coal and dump cars	Conductors' vans	Tool cars	Snow plows	Snow sweepers	Equipped with fenders	Equipped with stoves	Equipped with electric heaters
Box p'sngr cars	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Clo- sed	....
Closed " "	51	....	....	....	....	....	....	....	....	....	....	....	....	....		....
Open " "	9	5	....	....	....	....	....		....	....	....	2	2	All	All	....

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses	
Carts and snow sleds	
Other railway rolling stock—Miscellaneous	3
Other highway vehicles—Line wagons	1
Line Auto truck	1
Horses	1
Other items of equipment	

DESCRIPTION OF RAILWAY OWNED AND OPERATED

Railway Owned, Leased and Operated (by Electric Ppwer)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other Railways	Total owned, leased, etc.	Total operated
Length of railway line					
Length of second main track					
Total length of main track	36.10				36.10
Length of sidings, switches, etc.					
Total, computed as single track					
Length of line under construction					

Description of Freight Carried

Description of Road Bed, Etc.

Names of the several cities and towns in which the railways operated by the Company are located:

Grade Crossings with Railroads, Etc.

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks at Crossings	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (......in number), viz.:				
WithGrand Trunk, Richmond St.		Derails and gates	5	2
With Grand Trunk, Rectory St.		Derails and gates	5	1
With Grand Trunk, Dundas St.		Interlocker	1	1
With Canadian Pacific, Richmond St.		Derails and gates	2	2
Canadian Pacific, Richmond St. spur	No protect'n		1	2
With Canadian Pacific, Adelaide St.		Derail	2	1
With London & Port Stanley, Horton St.		Interlocker	1	1
With London & Port Stanley, South St.		Interlocker	2	1
No. junctions with other railways	1			
No. of overhead bridges				
No. of highway crossings	5			
Height of overhead bridges above rail level				
Radius of sharpest curve	37			
No. of feet per mile of heaviest gradient	334			
Gauge of railway	56½"			
Width of devil strip				
Total number of tracks at crossings			19	11

Number of above crossings at which frogs are inserted in the tracks: All crossings.

SUMMARY OF ACCIDENTS TO PROPERTY

Accidents	Due to unavoidable causes		Due to carelessness of employees		Due to carelessness of other persons	
	Serious	Trivial	Serious	Trivial	Serious	Trivial
Damage to company's property	....	27	....	9	....	55
Damage to property of municipality	....	....	....	....	....	....
Damage to private property	3	58	1	4	2	93
Total	3	85	1	13	2	148

Total amount paid during year for damages caused by accidents:

ACCIDENTS TO PERSONS

Killed and Injured	From causes beyond their own control		From their own misconduct or carelessness		Total	
	Killed	Injured	Killed	Injured	Killed	Injured
Passengers	....	8	....	34	....	42
Employees	....	13	....	2	....	15
Other persons	....	11	....	10	....	21
Totals	....	32	....	46	....	78

WAGES STREET RAILWAY CO.'S OR RADIAL RAILWAYS

....

....

....

CORPORATE ORGANIZATION

Corporate name and address of the company:
The London Street Railway Company.

Names and business address of principal officers:
President—Chas. Currie, Cleveland, Ohio.
Vice-President—Chas. H. Ivey, London, Ont.
Treasurer—Leonard Tait, London, Ont.
General Counsel—Ivey, Elliott & Ivey.
Auditor—F. H. Coles and J. P. Dewan.
General Manager—C. B. King.
Superintendent—H. H. Humeston.

Name of officer, and address, to whom correspondence regarding this report should be addressed:
L. Tait, Secretary-Treasurer, London, Ont.

Names and residence of Board of Directors:
Chas. Currie, Cleveland Hotel, Cleveland, Ohio.
R. R. Alexander, Cleveland, Trust Co., Cleveland, Ohio.
P. W. D. Brodrick, Molson Bank, Toronto, Ont.
Wm. Spencer, 300 Duperin Ave., London, Ont.
Chas. H. Ivey, 256 Central Ave., London, Ont.
C. B. King, 386 Dufferin Ave., London, Ont.
R. G. Ivey, 196 Bridport St., London, Ont.

ANNUAL REPORT OF THE

MOUNT McKAY AND KAKABEKA FALLS RAILWAY COMPANY, LIMITED

For the Year Ending December 31, 1920

Name of municipality or municipalities in which railway operates: Municipality of Neebing and Township of Paipoonge.
Name of company: Mount McKay and Kakabeka Falls Railway Company, Limited.
Date of incorporation: 1904.
Dates of subsequent legislation: 1908, 1912, 1916 and 1920.
Date of expiry of franchise: April 1922.
Amount paid to municipality per year per mile of track: Nil.
Further amounts, if any, paid to municipality by way of percentage earnings, % on $: Nil.
Total amount paid municipality during year for franchise: Nil.
Appraised value of plant and tracks for purposes of taxation: No taxes on plant.
Total taxes paid during year to municipality: $449.59.
Amount of aid received from municipality, if any: Nil.
Power consumed per car mile in kilowatt hours: Nil.
Cost per horse power for motive power used in operating plant: Nil.
Cost of power per kilowatt per hour: Nil.
Cost of power per car mile: Nil.
Average speed of cars: Nil.
State if power is purchased or generated by company: Steam.
State if power is generated by steam or water power:
Give number of power houses:

General Exhibit for the Year

Gross earnings from operation, from gravel sand and fill, off company's land			$27,161 21
Operating expenses			15,367 16
Net earnings from operation			$11,794 05
Miscellaneous income—Dividends on stock		41 50	
Total miscellaneous income			41 50
Gross income above operating expenses			$11,835 55
Charges upon income accrued during the year:			
Interest on funded debt			
Interest and discount on unfunded debts and loans			
Taxes, municipal	$449 59		
Taxes, provincial	100 00		
Taxes, commutation	549 59		
		549 59	
Rentals of leased railways			
Payments to sinking and other special funds			
Other deductions from income			
Total charges and deductions from income			549 59
Net divisible income			$11,285 96
Dividends declared 1¾ per cent. on $386,955		6,771 39	
Total dividends declared			6,771 39
Surplus for the year ending 31st December, 1920			$4,514 57
Amount of surplus, December 31, 1919		10,361 88	
Credits to profit and loss account during the year			
Total credits			
Debits to profit and loss account during the year			
Total debits			
Net amount credited to profit and loss			10,361 88
Total surplus, December 31, 1920			$14,876 45

Earnings and Expenses of Operation

Earnings from operation:

Receipts from passengers carried	
" carriage of mails	
" carriage of express and parcels	
" carriage of freight	
" tolls for use of tracks by other companies	
" rentals of buildings and other property	
" advertising in cars	
" interest on deposits	
Other earnings from operation	
Gross earnings from operation	

Expenses of operation:

General expenses:

Salaries of general officers and clerks and attendants		$1,805 00
General office expenses and supplies		33 99
Legal expenses		
Insurance		371 00
Switching charges, if any		
Other general expenses—Interest and Bank charges	$127 90	
Renewal of charter	194 43	
		322 33

Maintenance of roadbed and buildings:

Repair of roadbed and track	902 25
Repair of electric line construction	
Repair of buildings	

Maintenance of equipment:

Repair of carsr	234 60
Repair of electric equipment of cars	
Repair of miscellaneous equipment	1,367 73
Provender and stabling—Waste, oils, etc.	281 45
Fuel	3,772 64

Transportation expenses:

Cost of electric motive power, $......; less power sold, $......; net	
Wages and compensation of persons employed in conducting transportation	5,889 52
Removal of snow and ice	
Damages for injuries to persons and property	
Tolls for trackage over other railways	
Rentals of buildings and other property	
Other transportation expenses—Miscellaneous	386 95
Total operating expenses	$15,367 16

Property Accounts—Additions and Deductions during the Year

Additions to railway:

Extension of tracks (length........feet)	
New electric line construction (length........feet)	
Other additions to railway	
Total additions to railway	

Additions to equipment:

Additional cars (........in number)	
Electric equipment of same	
Other additional rolling stock	
Other additions to equipment	
Total additions to equipment	

Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc.		
Additional equipment of power stations		
Other new buildings necessary for operation of railway		
Total additions to land and buildings		
Additions to other permanent property		
Total additions to other permanent property		
Total additions to property accounts		
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts)		
Total deductions from property accounts		
Net addition to property accounts for the year		

General Balance Sheet

Assets

Cost of railway:		
Roadbed and tracks	$44,163 84	
Electric line construction, including poles, wiring, feeder lines, etc.	5,671 62	
Interest accrued during construction of railway		
Engineering and other expenses incident to construction		
Other items of railway cost		
Total cost of railway owned		$49,835 46
Cost of equipment:		
Passenger cars and other rolling stock	39,185 44	
Electric equipment of same		
Other items of equipment		
Total cost of equipment owned		39,185 44
Cost of land and buildings:		
Land necessary for operation of railway	342,500 00	
Electric power stations, including equipment		
Other buildings necessary for operation of railway	2,124 10	
Total cost of land and buildings owned		344,624 10
Other permanent property—Franchise	50,000 00	
Total cost of other permanent property owned		50,000 00
Total permanent investments		$483,645 00
Cash and current assets:		
Cash	854 42	
Bills and accounts receivable	1,412 43	
Sinking and other special funds		
Other cash and current assets		
Total cash and current assets		2,266 85
Miscellaneous assets:		
Prepaid expenses	484 05	
Materials and supplies	1,469 60	
Other assets and property—Canada Foundry Co. stock	1,490 00	
Total miscellaneous assets		3,443 65
Profit and loss balance—deficit		
Total		$489,355 50

LIABILITIES

Capital stock, common		$386,955 00
preferred		
Total capital stock		$386,955 00
Funded debt		
Real estate mortgages		
Current liabilities:		
Loans and notes payable		
Audited vouchers and accounts	21 13	
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities		
Total current liabilities		21 13
Accrued liabilities:		
Interest accrued and not yet due		
Taxes accrued and not yet due		
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		
Sinking and other special funds:		
Reserve account	$87,502 92	
Total sinking and other special funds		$87,502 92
Profit and loss balance—surplus		14,876 45
Total		$489,355 50

CAPITAL STOCK—REAL ESTATE MORTGAGES

Capital stock:			
Capital stock authorized by law, common		$500,000 00	
preferred		Nil	
Total capital stock authorized by law		500,000 00	
Capital stock authorized by votes of company, common			
preferred			
Total capital stock authorized by vote			
Capital stock issued and outstanding, common			
preferred			
Total capital stock outstanding			
Amount paid in on........shares not yet issued			
Amount paid in on stock to be issued			
Scrip convertible into stock			
Other paid stock liability			
Total capital stock liability			
Number of shares issued and outstanding, common			
preferred			
Total number of shares outstanding			
Number of stockholders, common			
preferred			
Total number of stockholders			
Amount of stock held, common			
preferred			
Total stock held			

REAL ESTATE MORTGAGES

....

....

....

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

....

....

....

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, etc.:

Number of passengers paying revenue carried during the year	None
Number carried per mile of main railway track operated	
Number of car miles run	
Average number of persons employed	10
If the Company commenced operation during the year, give the date	
Average amount received from each passenger	
Amount of passenger earnings per mile of road	

Freight:

Number of tons freight earning revenue	
Number of tons freight carried per mile of road	
Average amount received for each ton of freight	
Average receipts per ton of freight per mile	
Average rate of speed of passenger cars per hour	
Average rate of speed of freight cars per hour	

DESCRIPTION OF EQUIPMENT

Box passenger cars—Trailer cars	2
Coal and dump cars	10
Open passenger cars	

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses	
Carts and snow sleds	
Other railway rolling stock—1 steam locomotive	
Other highway vehicles	
Horses	
Other items of equipment	
Horses	
Other items of equipment	

DESCRIPTION OF RAILWAY OWNED AND OPERATED

RAILWAY OWNED, LEASED AND OPERATED (BY ELECTRIC POWER)

Railway owned, etc..	Owned	Heldunder lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	5 miles				5 miles
Length of second main track					
Total length of main track	5 miles				5 miles
Length of sidings, switches, etc.	1½ mil's				1½ miles
Total, computed as single track					
Length of line under construction					

DESCRIPTION OF FREIGHT CARRIED

Sand and Gravel

DESCRIPTION OF FREIGHT CARRIED

Sand and Gravel

DESCRIPTION OF ROAD BED, ETC.

Main Lines 80 Lbs.
Side Tracks 50 and 60 Lbs.

Names of the several cities and towns in which the railways operated by the Company are located: Municipality of Neebing, Township of Paipoonge.

GRADE CROSSINGS WITH RAILROADS, ETC.

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks at Crossing	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (......in number), viz.:				
With C.N.R.—They to come to Stop and this company to come to 4 miles per hour				
No. junctions with other railways				
No. of overhead bridges				
No. of highway crossings	Three			
Height of overhead bridges above rail level				
Radius of sharpest curve	15%			
No. of feet per mile of heaviest gradient	3%			
Gauge of railway				
Width of devil strip				
Total number of tracks at crossings				

Number of above crossings at which frogs are inserted in the tracks.

SUMMARY OF ACCIDENTS TO PROPERTY

ACCIDENTS TO PERSONS

WAGES STREET RAILWAY CO.'S OR RADIAL RAILWAYS

CORPORATE ORGANIZATION

Corporate name and address of the company:

Mount McKay and Kakabeka Falls Railway Company, Limited, Fort William, Ont.

Names and business address of principal officers:

President—James Murphy, Simpson Street, Fort William, Ont.
Vice-President—James Toukin, S. Mary Street, Fort William, Ont.
Treasurer—C. H. Jackson, Fort William, Ont.
Clerk of Corporation—W. C. Lillie, N. May Street, Fort William, Ont.
General Counsel—Kyke & Beeman, Fort William, Ont.
Auditor—Smith & Ross, Fort William, Ont.

Name of officer, and address, to whom correspondence regarding this report should be addressed:
W. C. Lillie, Secretary, P.O. Box 210, Fort William, Ont.

Names and residence of Board of Directors:

James Murphy, Fort William, Ont.
James Tonkin, Fort William, Ont.
Clarence H. Jackson, Fort William, Ont.
G. R. Duncan, Fort William, Ont.
Wm. C. Lillie, Fort William, Ont.

ANNUAL REPORT OF THE

NIAGARA FALLS PARK AND RIVER DIVISION OF INTERNATIONAL RAILWAY COMPANY

FOR THE YEAR ENDING JUNE 30, 1920

GENERAL INFORMATION

Name of municipality or municipalities in which railway operates: From Chippawa to Queenston in the Province of Ontario through the intervening municipalities.
Name of company: International Railway Company.
Date of incorporation: February 20th, 1902.
Dates of subsequent legislation: This company acquired under provisions of Chapter 86 of the Laws of Ontario for 1901, the Railway of the Niagara Falls Park and River Company, incorporated by Chapter 96 of the Laws of 1892. The Company operates this Railway in the Province of Ontario on the lands vested in the Commissioners of Queen Victoria Park on private property as a division of the entire system.
Date of expiry of franchise: 1932 and may be renewed for 20 years
Amount paid to municipality per year per mile of track: $254.37.
Further amounts, if any, paid to municipality by way of percentage earnings, % on $: None

Total amount paid municipality during year for franchise	None
Appraised value of plant and tracks for purposes of taxation	$326,150 00
Total taxes paid during year to municipality	6,132 52
Amount of aid received from municipality, if any	None
Power consumed per car mile in kilowatt hours	9.45 kw. hrs.
Cost per horse power for motive power used in operating plant	None
Cost of power per kilowatt per hour	$0.00431
Cost of power per car mile	$0.0408
Average speed of cars	7.7
State if power is purchased or generated by company	Generated
State if power is generated by steam or water power	Water power
Give number of power houses	One

NOTE—Part of the power generated in Canada is used by other divisions of the company in the United States; no record is kept by the respondent of the amount consumed by the Park and River Division.

GENERAL EXHIBIT FOR THE YEAR

Gross earnings from operation			$181,284 61
Operating expenses			130,056 10
Net earnings from operation			$51,228 51
Miscellaneous income:			
Interest on deposits		$1,308 37	
Rent of land and buildings		7,680 19	
Total miscellaneous income			8,988 56
Gross income above operating expenses			$60,217 07
Charges upon income accrued during the year:			
Interest on funded debt		30,000 00	
Interest and discount on unfunded debts and loans			
Taxes, municipal	$5,957 37		
Taxes, mileage	175 15		
Taxes, commutation			
		$6,132 52	
Rentals of leased railways—Not applicable			
Payments to sinking and other special funds—Not applicable			
Other deductions from income—Not applicable			
Total charges and deductions from income			$36,132 52
Net divisible income			$24,084 55
Dividends declared ....per cent. on $			
Dividends declared ....per cent. on $			
Total dividends declared			
Surplus for the year ending June 30, 191			$24,084 55
Amount of surplus or deficit June 30, 191			
Credits to profit and loss account during the year			
Total credits			
Debits to profit and loss account during the year			
Total debits			
Net amount credited to profit and loss			
Total surplus or deficit, June 30, 1920—Not applicable			

EARNINGS AND EXPENSES OF OPERATION

Earnings from operation:	
Receipts from passengers carried	$171,171 08
" carriage of mails	555 50
" carriage of express and parcels	522 35
" Switching	5,754 21
" tolls for use of tracks by other companies	510 00
" rentals of buildings and other property	141 68
" advertising in cars, etc.	619 79
" Chartered cars	357 60
Other earnings from operation:	
Parcel room receipts	49 40
Rent from equipment	440 00
Sale of power	1,163 00
Gross earnings from operation	$181,284 61

Expenses of operation:	
General expenses:	
Salaries of general officers and clerks and attendants	1,977 16
General office expenses and supplies	5,050 71
Legal expenses	1,499 76
Insurance	2,047 29
Switching charges, if any	
Other general expenses	17,480 30
Maintenance of roadbed and buildings:	
Repair of roadbed and track	20,666 56
Repair of electric line construction	6,190 97
Repair of buildings	2,297 33
Maintenance of equipment:	
Repair of cars	3,676 46
Repair of electric equipment of cars	977 41
Repair of miscellaneous equipment	384 21
Provender and stabling	1,457 23
Transportation expenses:	
Cost of electric motive power, $......; less power sold, $......; net	13,058 27
Wages and compensation of persons employed in conducting transportation	48,176 51
Removal of snow and ice	2,829 30
Damages for injuries to persons and property	264 05
Tolls for trackage over other railways	
Rentals of buildings and other property	
Other transportation expenses—Cleaning and sanding track	820 17
Miscellaneous car service expense	1,202 30
Total operating expenses	$130,056 10

PROPERTY ACCOUNTS—ADDITIONS AND DEDUCTIONS DURING THE YEAR

Additions to railway:		
Extension of tracks (length........feet)		
New electric line construction (length........feet)		
Other additions to railway		
Total additions to railway		
Additions to equipment:		
Additional cars (........in number)		
Electric equipment of same		
Other additional rolling stock		
Other additions to equipment		
Total additions to equipment		
Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc.		
Additional equipment of power stations		
Other new buildings necessary for operation of railway		
Total additions to land and buildings		
Additions to other permanent property		
Total additions to other permanent property		
Total additions to property accounts		
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts)		
Total deductions from property accounts		
Net addition to property accounts for the year		

General Balance Sheet

Assets

Cost of railway:
Roadbed and tracks
Electric line construction, including poles, wiring, feeder lines, etc.
Interest accrued during construction of railway
Engineering and other expenses incident to construction
Other items of railway cost

Total cost of railway owned

Cost of equipment:
Passenger cars and other rolling stock
Electric equipment of same
Other items of equipment

Total cost of equipment owned

Cost of land and buildings:
Land necessary for operation of railway
Electric power stations, including equipment
Other buildings necessary for operation of railway

Total cost of land and buildings owned
Other permanent property

Total cost of other permanent property owned

Total permanent investments

Cash and current assets:
Cash
Bills and accounts receivable
Sinking and other special funds
Other cash and current assets

Total cash and current assets

Miscellaneous assets:
Materials and supplies
Other assets and property

Total miscellaneous assets
Profit and loss balance—deficit

Total

(Unable to furnish for Park and River Division)

Liabilities

Capital stock, common
preferred

Total capital stock
Funded debt
Real estate mortgages

Current liabilities:
Loans and notes payable
Audited vouchers and accounts
Salaries and wages
Dividends not called for
Matured interest coupons unpaid
Rentals due and unpaid
Miscellaneous current liabilities

Total current liabilities

Accrued liabilities:
Interest accrued and not yet due
Taxes accrued and not yet due
Rentals accrued and not yet due
Miscellaneous accrued liabilities

Total accrued liabilities
Sinking and other special funds

Total sinking and other special funds
Profit and loss balance—surplus

Total

CAPITAL STOCK—REAL ESTATE MORTGAGES

Not applicable as this division has no Capital stock separate and apart from the Capital stock of International Railway Company.

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

Mortgage Bonds—Rate of interest, 5%; Day of maturity, 11-1-1962; Amount outstanding, $600,000.00; Interest paid during the year, $30,000.00.

Mortgage of the Niagara Falls Park and River Railway Company, matured on January 1, 1914, and was paid on that date—$600,000.00. International Railway Refunding and Improvement 5's were issued in place of said N.F.P. & R. Ry. Mortgage being in accordance with section 4 of Article I of said International Railway Refunding and Improvement Mortage dated November 1, 1912, and expiring November 1, 1962, amounting to $60,000.00

Totals—Amount outstanding, $600,000.00; Interest paid during the year, $30,000.00.

SINKING AND OTHER SPECIAL FUNDS

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, Etc.:	
Number of passengers paying revenue carried during the year	1,666,534
Number carried per mile of main railway track operated	72,094
Number of car miles run	322,943
Average number of persons employed	52
If the Company commenced operation during the year, give the date	
Average amount received from each passenger	$0.1027
Amount of passenger earnings per mile of road	$7,404 87
Freight:	
Number of tons freight earning revenu	None—
Number of tons freight carried per mile of road	All Switching
Average amount received for each ton of freight	
Average receipts per ton of freight per mile	
Average rate of speed of passenger cars per hour	7.9
Average rate of speed of freight cars per hour	7.9

Description of equipment	No. of motor cars	Trailer cars	Official cars	Electric locomotives	Baggage and mail express cars	Cattle and box cars	Refrigerator cars	Platform cars	Coal and dump cars	Conductors' vans	Tool cars	Snow plows	Snow sweepers	Equipped with fenders	Equipped with stoves	Equipped with electric heaters
Box passenger cars	11				2			2				1				11
Open passenger cars	16															

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses	
Carts and snow sleds	
Other railway rolling stock	
Other highway vehicles	None
Horses	
Other items of equipment	

RAILWAR OWNED, LEASED AND OPERATED (BY ELECTRIC POWER)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	11.914			11.914	11.914
Length of second main track	11.202			11.202	11.202
Total length of main track	23.116			23.116	23.116
Length of sidings, switches, etc.	.992			.992	.992
Total, computed as single track	24.108			24.108	24.108
Length of line under construction					

DESCRIPTION OF FREIGHT CARRIED

No record of Commodities—our record is for switching only.

DESCRIPTION OF ROAD BED, ETC.

Rails		Weight per yard		No. Ties to mile	General Remarks
Steel	Iron	Steel	Iron		
4¼″		T-57 Lbs.		2,640	

Names of the several cities and towns in which the railways operated by the Company are located: Chippawa, Niagara Falls, Queenston, Ontario and various cities and towns in the state of New York, U.S.A.

GRADE CROSSINGS WITH RAILROADS, ETC.

SUMMARY OF ACCIDENTS TO PROPERTY

ACCIDENTS TO PERSONS

	Killed	Injured
Passengers	....	9
Employees	1	....
Other persons	....	2
Totals	1	11

WAGES STREET RAILWAY CO.'S OR RADIAL RAILWAYS

	No.	Average No. of hours on Day	Wages per day		
			1st Yr.	2nd Yr.	3rd Yr.
Inspectors	1	12	$175 00	per mo.	
Conductors	14	10	5 50	5 80	6 00
Motormen	12	10	5 50	5 80	6 00
Starters	....	....	....	....	....
Roadmen	16	10	4 75	4 75	4 75
Linemen	....	....	....	....	....
Engineers	....	....	....	....	....
Track Foremen	1	10	140 00	per mo.	
Car House Foremen	2	12	162 50	per mo.	
Electricians	2	10	7 68	7 68	7 68
Oilers	2	12	6 54	6 54	6 54
Machinists and mechanics	....	....	....	....	....
Car cleaners	....	....	....	....	....
Average number of employees	....	....	....	....	....
Ticket Agents	2	12	6 54	6 54	6 54
Switchmen and crossing tenders	....	....	....	....	....

CORPORATE ORGANIZATION

Corporate name and address of the company:
International Railway Company, 210 Littell Building, Buflalo, N.Y.

Names and business address of principal officers:

President—Herbert G. Tully, Ltitell Bldg, Buffalo, N.Y.
Vice-President—Edgar J. Dickson, Littell Bldg., Buffalo, N.Y.
Treasurer—Philip C. Reinhardt, Littell Bldg, Buffalo, N.Y.
Secretary—Karl Weber, Littell Bldg, Buffalo, N.Y.
General Counsel—Penny, Killeen and Nye, 856 Elliott Sq., Buffalo, N.Y.; Alex. Fraser, Niagara Falls, Ont.; Cohn, Chormann and Franchot, 44 Falls St., Niagara Falls, N.Y.; A. Monro Grier, Niagara Falls, Ont.
Auditor—Charles A. Chavel, Littell Building, Buffalo, N.Y.
General Manager—Edgar J. Dickson, Littell Building, Buffalo, N.Y.
Superintendent—E. H. Henning, Niagara Falls, Terminal, Niagara Falls, N.Y.

Name of officer, and address, to whom correspondence regarding this report should be addressed

Charles A. Chavel, Auditor, 210 Littell Bldg., Buffalo, N.Y.

Names and residence of Board of Directors:

Jno. W. Barr, Fidelity and Columbia Trust Co., Louisville, Ky.
S. Reading Bertram, 40 Wall Street, New York City.
George Bullock, 61 Broadway, New York City.
Jno. L. Clawson, Wash. and N. Div. Streets, Buffalo, N.Y.
Edward G. Counette, 61 Broadway, New York City.
Marshall J. Dodge, 40 Wall Street, New York ,City.
Rodman E. Griscom, 40 Wall Street, New York City.
Francis T. Homer, 40 Wall Street, New York City.
Henry J. Pritchard, 61 Broadway, New York City.
Charles R. Huntley, Electric Bldg., Buffalo, N.Y.
Henry W. Killeen, 856 Elliott Square, Buffalo, N.Y.
Thomas Penny, 856 Elliott Square, Buffalo, N.Y.
Robt. W. Pomeroy, 1006 Fidelity Bldg., Buffalo, N.Y.
Harry T. Ramsdell, 272 Main Street, Buffalo, N.Y.
George W. Wilson (deceased), 80 Claremont Ave., Buffalo, N.Y.
Henry C. Zeller, 272 Howard Street, Buffalo, N.Y.
Harry Yates, 51 Hamburg Street. Buffalo. N.Y.

ANNUAL REPORT OF THE
PORT ARTHUR CIVIC RAILWAY COMPANY

For the Year Ending June 30, 1920

GENERAL INFORMATION

Name of municipality or municipalities in which railway operates: City of Port Arthur.

Name of company: Port Arthur Civic Railway.

Date of incorporation:

Dates of subsequent legislation—

1891—54 Victoria, Chap. 78
1892—55 Victoria, Chap. 82
1893—56 Victoria, Chap. 78
1895—58 Victoria, Chap. 73
1899—62 Victoria, Chap. 70
1897—60 Victoria, Chap. 70
1900—63 Victoria, Chap. 86
1903—3 Edward VII, Chap. 76
1905—5 Edward VII, Chap. 69
1909—9 Edward VII, Chap. 118
1914—4 George V, Chap. 88
1908—8 Edward VII, Chap. 80

Provincial
1893—53 Victoria, Chap. 78
1895—58 Victoria, Chap. 73
1901—1 Edward VII, Chap. 65
1903—3 Victoria, Chap. 76
1906—6 Edward VII, Chap. 30
1907—7 Edward VII, Chap. 83
1908—8 Edward VII, Chap. 80
1909—9 Edward VII, Chap. 118
1910—10 Edward VII, Chap. 81
1911—1 George V, Chap. 52
1912—2 Victoria, V, Chap. 35
1913—3 and 4 George V, Chap. 36
1914—4 George V, Chap. 31

Date of expiry of franchise:

Amount paid to municipality per year per mile of track: None.
Further amounts, if any, paid to municipality by way of percentage earnings, % on $: None.
Total amount paid municipality during year for franchise: None.
Appraised value of plant and tracks for purposes of taxation: None.
Total taxes paid during year to municipality: None.
Amount of aid received from municipality, if any: City receives balance of receipts over operating expenses and pay. all debenture interest principal and S. funds.
Power consumed per car mile in kilowatt hours.
Cost per horse power for motive power used in operating plant: $20 per H.P. per annum.
Cost of power per kilowatt per hour: 0.0056 A.C.
Cost of power per car mile:
Average speed of cars: 12 miles per hour.
State if power is purchased or generated by company: Purchased.
State if power is generated by steam or water power: Water.
Give number of power houses: Two.

General Exhibit for the Year

Gross earnings from operation		$194,710 61
Operating expenses		142,260 32
Net earnings from operation		52,450 29
Miscellaneous income		
Total miscellaneous income		
Gross income above operating expenses		
Charges upon income accrued during the year:		
Interest on funded debt	$66,984 31	
Interest and discount on unfunded debts and loans		
Taxes, municipal		
Taxes, provincial		
Taxes, commutation		

Rentals of leased railways:			
Other deductions—City of Fort William		$987 74	
Bad debts		78 00	
Loss on stock		13 16	
Cars—street car advts.		162 50	
Payments to sinking and other special funds			
Other deductions from income			
Depreciation reserve	$1,810 12		
Accident fund	1,500 00		
		$3,310 12	
Total charges and deductions from income			$71,535 83
Net divisible income			
Dividends declared ....per cent. on $			
........per cent. on			
Total dividends declared			
Deficit for the year ending June 30, 191			$19,085 54
Amount of surplus or deficit June 30, 191			
Credits to profit and loss account during the year			
Total credits			
Debits to profit and loss account during the year			
Total debits			
Net amount credited to profit and loss			
Total deficit, June 30, 191			$19,085 54

EARNINGS AND EXPENSES OF OPERATION

Earnings from operation:	
Receipts from passengers carried	$189,598 08
" carriage of mails	350 00
" carriage of express and parcels—special cars	2,906 30
" carriage of freight	
" tolls for use of tracks by other companies	
" rentals of buildings and other property	278 71
" advertising in cars	1,137 00
" interest on deposits	
Other earnings from operation—Miscellaneous reserve	440 52
Gross earnings from operation	$194,710 61
Expenses of operation:	
General expenses:	
Salaries of general officers and clerks and attendants	6,780 20
General office expenses and supplies—Printing and stationery	2,111 65
Legal expenses	
Insurance	2,100 02
Switching charges, if any—Stores expenses	605 18
Other general expenses—Miscellaneous gen. and advertising	419 04
Superintendence	4,309 67
Telegrams and telephones	176 06
Maintenance of roadbed and buildings:	
Repair of roadbed and track	8,825 88
Repair of electric line construction	3,850 13
Repair of buildings	166 48
Maintenance of equipment:	
Repair of cars	17,755 63
Repair of electric equipment of cars	8,533 30
Repair of miscellaneous equipment—Shop expense	378 09
Provender and stabling—car service supplies	3,747 64

Transportation expenses:

Cost of electric motive power, $20,009.20; less power sold, $300.00; net	19,709 28
Wages and compensation of persons employed in conducting transportation—motormen and conductors	56,879 13
Removal of snow and ice—Cleaning and sanding track	1,539 02
Damages for injuries to persons and property	413 34
Tolls for trackage over other railways	2,508 82
Rentals of buildings and other property	
Other transportation expenses—Power equipment	1,058 87
Power plant, wages and sundry supplies	16 44
Total operating expenses	$142,260 32

PROPERTY ACCOUNTS—ADDITIONS AND DEDUCTIONS DURING THE YEAR

Additions to railway:		
Extension of tracks (length........feet)		
New electric line construction (length........feet)		
Other additions to railway		
Total additions to railway		
Additions to equipment:		
Additional cars (........in number)		
Electric equipment of same		
Other additional rolling stock		
Other additions to equipment		
Total additions to equipment		
Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc.		
Additional equipment of power stations		
Other new buildings necessary for operation of railway		
Total additions to land and buildings		
Additions to other permanent property		
Total additions to other permanent property		
Total additions to property accounts		
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts)		
Total deductions from property accounts		
Net addition to property accounts for the year		

GENERAL BALATNCE SHEET

ASSETS

Cost of railway:		
Roadbed and tracks		
Electric line construction, including poles, wiring, feeder lines, etc.		
Interest accrued during construction of railway		
Engineering and other expenses incident to construction		
Other items of railway cost		
Total cost of railway owned		
Cost of equipment:		
Passenger cars and other rolling stock		
Electric equipment of same		
Other items of equipment		
Total cost of equipment owned		

Cost of land and buildings:		
Land necessary for operation of railway		
Electric power stations, including equipment		
Other buildings necessary for operation of railway		
Debenture issue	$918,184 00	
Capital exp. not covered by Deb.	22,117 84	
	$940,301 84	
Less principal paid off	92,354 34	
Other permanent property	$847,747 50	
Less unexpended portion of Deb.	63,390 14	
	$784,357 36	
Total cost of Railway not distributed as required.		
Total cost of other permanent property owned		$784,357 36
Total permanent investments		
Cash and current assets:		
Cash	400 00	
Bills and accounts receivable	39,824 11	
Sinking and other special funds		
Other cash and current assets		
Unearned insurance	974 64	
Total cash and current assets		41,198 75
Miscellaneous assets:		
Materials and supplies	$18,213 38	
Other assets and property—Investments	73,504 60	
Total miscellaneous assets		$91,717 98
Loss and gain account		153,798 12
Loss balance—deficit		19,085 54
Total		$1,090,157 75

LIABILITIES

Capital stock, common		
preferred		
Total capital stock		
Funded debt		$825,629 66
Real estate mortgages		
Current liabilities:		
Loans and notes payable		
Audited vouchers and accounts—Accounts pay	$125,492 61	
Salaries and wages—Pay roll	4,169 95	
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities—Tickets in circulation	7,413 65	
Total current liabilities		$137,076 21
Accrued liabilities:		
Interest accrued and not yet due		
Taxes accrued and not yet due		
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		
Sinking and other special funds and reserves	127,451 88	
Total sinking and other special funds		$127,451 88
Profit and loss balance—surplus		
Total		$1,090,157 75

CAPITAL STOCK—REAL ESTATE MORTGAGES

....

....

....

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

Funded Debt—Description of Bonds, etc.	Rate of Interest	Day of Maturity	Amount Outstanding	Interest paid during the Year
Mar. 1—Sinking Fund By-law No. 281	5%	Mar. 1, 1921	$75,000 00	$3,750 00
Mar. 1 " " 362	5%	Mar. 1, 1923	40,000 00	2,000 00
July 20 " " 657	5%	July 20, 1933	7,000 00	350 00
July 8 " " 12	5%	July 8, 1937	55,000 00	2,750 00
July 8 " " 15	5%	July 8, 1937	18,000 00	900 00
July 15 " " 301	5%	July 15, 1939	28,500 00	1,425 00
July 15 " " 298	5%	July 15, 1939	9,500 00	475 00
Oct. 26 " " 367	5%	Oct. 26, 1924	12,000 00	600 00
Aug. 16 " " 340	4½%	Aug. 16, 1939	1,284 00	57 78
Jan. 1 " " 450	4½%	July 1, 1940	10,000 00	450 00
Jan. 1 " " 458	4½%	July 1, 1940	12,000 00	540 00
Jan. 1 " " 488	4½%	July 1, 1940	75,000 00	3,375 00
Jan. 1 " " 489	4½%	July 1, 1940	15,000 00	675 00
Feb. 1 " " 522	5%	Feb. 1, 1926	12,500 00	625 00
July 10 " " 571	4½%	July 10, 1941	17,250 00	776 25
Mar. 4 " " 766	5%	Mar. 4, 1942	58,500 00	2,925 00
Mar. 4 " " 756	5%	Mar. 4, 1942	11,000 00	550 00
Mar. 4 " " 754	5%	Mar. 4, 1942	5,600 00	280 00
May 23 " " 790	5%	May 23, 1942	21,000 00	1,050 00
May 23 " " 791	5%	May 23, 1942	11,500 00	575 00
May 23 " " 792	5%	May 23, 1942	1,400 00	70 00
Jan. 13 " " 964	5%	Jan. 13, 1933	32,400 00	1,620 00
Jan. 1 " " 1049	5%	Jan. 1, 1929	33,000 00	1,650 00
Jan. 1 " " 1149	5%	Jan. 1, 1934	35,000 00	1,750 00
Sept. 30 " " 857	5%	Sept. 30, 1942	82,200 00	4,110 00
Sept. 30 " " 857	5%	Sept. 30, 1942	34,000 00	1,700 00
Nov. 30 " " 1298	5%	Nov. 1, 1924	22,000 00	1,100 00
Sept. 30 " " 858	5%	Sept. 30, 1942	4,300 00	215 00
Jan. 13 " " 966	5%	Jan. 13, 1933	6,530 00	327 50
			$746,484 00	$36,671 53
Feb. 1—Annual Instalm't B/L. No. 816	5%	Feb. 1, 1921	1,559 94	121 25
Aug. 1 " " 852	5%	Aug. 1, 1921	1,074 84	55 85
July 8 " " 817	5%	July 8, 1927	7,779 37	389 81
July 13 " " 38	5%	Jan. 13, 1923	2,098 87	122 05
Aug. 16 " " 341	4½%	Aug. 16, 1924	2,125 60	97 81
Sept. 27 " " 358	5%	Sept. 27, 1924	9,176 47	478 97
Sept. 27 " " 359	5%	Sept. 27, 1924	3,128 34	163 28
Nov. 15 " " 368	5%	Nov. 15, 1924	1,251 33	66 44
Nov. 1 " " 516	5%	Nov. 1, 1929	4,890 04	264 46
Feb. 1 " " 601	5%	Feb. 1, 1926	8,362 06	426 20
Sept. 1 " " 647	5%	Sept. 1, 1926	7,804 58	405 40
Nov. 1 " " 760	4½%	Nov. 1, 1926	3,566 49	173 44
Mar. 4 " " 820	4½%	Mar. 4, 1927	9,826 69	442 31
July 15 " " 923	5%	July 15, 1927	3,424 74	176 92
Jan. 1 " " 968	5%	Jan. 1, 1928	7,472 16	392 24
Nov. 1 " " 928	5%	Nov. 1, 1927	5,604 14	289 59
			$825,629 66	$40,737 55

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, Etc.:

Number of passengers paying revenue carried during the year	38,592.28
Number carried per mile of main railway track operated	2,082.69
Number of car miles run	702,720
Average number of persons employed	65
If the company commenced operation during the year, give the date	
Average amount received from each passenger	$0.04912
Amount of passenger earnings per mile of road	$9,688 20

Freight:

Number of tons freight earning revenue	
Number of tons freight carried per mile of road	
Average amount received for each ton of freight	
Average receipts per ton of freight per mile	
Average rate or speed of passenger cars per hour	
Average rate of speed of freight cars per hour	

Description of equipment	No. of motor cars	Trailer cars	Official cars	Electric locomotives	Baggage and mail express cars	Cattle and box cars	Refrigerator cars	Platform cars	Coal and dump cars	Conductors' vans	Tool Cars	Snow plows	Snow sweepers	Equipped with fenders	Equipped with stoves	Equipped with electric heaters
Box passenger cars	18	4	...	...	1	...	...	...	...	...	...	2	...	18	13	12
Open passenger cars	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses	None
Carts and snow sleds	
Other railway rolling stock	
Other highway vehicles	
Horses	
Other items of equipment	

DESCRIPTION OF RAILWAY OWNED AND OPERATED

RAILWAY OWNED, LEASED AND OPERATED (BY ELECTRIC POWER)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	12.43	None	None		
Length of second main track	6.10				
Total length of main track	18.53				
Length of sidings, switches, etc.	1.04				
Total, computed as single track	19.57				19.57 miles
Length of line under construction	None				

DESCRIPTION OF FREIGHT CARRIED

None

DESCRIPTION OF ROAD BED, ETC.

Rails Steel	Rails Iron	Weight per yard Steel	Weight per yard Iron	to mile	
		60 lbs.		2,000	
		80 lbs.		2,000	

Names of the several cities and towns in which the railways operated by the Company are located: Port Arthur.

GRADE CROSSINGS WITH RAILROADS, ETC.

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks at Crossing	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (......in number), viz.:—				
With Canadian Northern Railway		Derail	One	One
With C.P.R. Spur at Queen Street	One		One	
No. of junctions with other railways	1 with C.P.R. at Queen St. Spur.			
No. of overhead bridges				
No. of highway crossings				
Height of overhead bridges above rail level				
Radius of sharpest curve				
No. of feet per mile of heaviest gradient				
Gauge of railway				4′ 8½″
Width of devil strip				
Total number of tracks at crossings			2	
Number of above crossings at which frogs are inserted in the tracks	Diamonds			2

SUMMARY OF ACCIDENTS TO PROPERTY

ACCIDENTS TO PERSONS

WAGES STREET RAILWAY CO.'S OR RADIAL RAILWAYS

	No. Employed as at June 30, 1920	Average No. of hours on duty per day	Wages per day		
			1st 6 months	Next 18 mos.	3rd Yr
Inspectors—D. Reid, J. Hagerty			$148.50 137.50	per month per month	
Conductors	14	9¾	50	53	55
Motormen	14	9¾	50	53	55
Conductors and motormen operating one-man cars	8	9¾	53	56	58
Roadmen	12	9	47½		50
Linemen					
Master Mechanics	1	9	165.00	per month	
Roadmaster	1	9	130.00	per month	
Firemen—Pitman	1	9	110.00	per month	
Electricians					
Armature Winders	1		132.00	per month	
Machinists and Mechanics—two at 65c., two at 59c., one at 61c.	5	9			
Car cleaners	3	9	52c.	per hr.	
Average number of employees—About	65				
Watchmen	1		125.00	per month	
Switchmen and crossing tenders	1	9	50c	per hr.	

CORPORATE ORGANIZATION

Corporate name and address of the company:

Port Arthur Civic Railway, Whalen Building, Port Arthur.

Names and business address of principal officers:

President—Chairman of Commission, Malcolm C. Campbell, Arthur Street.
Treasurer—Donald McIver, Whalen Building.
Clerk of Corporation—Thomas F. Milne, Whalen Building.
General Counsel—Donald J. Cowan, Whalen Building.
Auditor—Macintosh, Cole & Robertson, Toronto Building.
General Manager—Malcolm M. Inglis, Toronto Building.

Name of officer, and address, to whom correspondence regarding this report should be addressed:
M. M. Inglis, Manager, Oort Arthur.

Names and residence of Board of Directors:

Public Utilities Commission:
Malcolm C. Campbell, 272 Park Street, Port Arthur, Chairman.
Edward J. Beaquier, 204 Arthur Street, Port Arthur Commission.
Bert Tourtellot, 108 Peter Street, Port Arthur Commission.
Isaac L. Matthews, 372 Arthur Street, Port Arthur, Mayor.

ANNUAL REPORT OF THE
ST. THOMAS MUNICIPAL STREET RAILWAY
For the Year Ending June 30, 1920

GENERAL INFORMATION

Name of municipality or municipalities in which railway operates: St. Thomas, Ontario.
Name of company: St. Thomas Municipal Street Railway.
Date of Incorporation:
Dates of subsequent legislation:
Date of expiry of vranchise:
Amount paid to municipality per year per mile of track:
Further amounts, if any, paid to municipality by way of percentage earnings, % on $:
Total amount paid municipality during year for franchise:
Appraised value of plant and tracks for purposes of taxation:
Total taxes paid during year to municipality:
Amount of aid received from municipality, if any:
Power consumed per car mile in kilowatt hours:
Cost per horse for motive power used in operating plant:
Cost of power per kilowatt per hour:
Cost of power per car mile:
Average speed of cars: 10 to 12 miles per hour.
State if power is purchased or generated by company: Purchased from Light, Heat and Power Dept.
State if power is generated by steam or water power: Hydro-Electric.
Give number of power houses: One.

General Exhibit for the Year

Gross earnings from operation	$36,620 27
Operating expenses	44,225 67
Net earnings from operation—deficit	$7,605 40
Miscellaneous income	
Total miscellaneous income	
Gross income above operating expenses	
Charges upon income accrued during the year:	
Interest on funded debt	
Interest and discount on unfunded debts and loans	
Taxes, municipal	
Taxes, provincial	
Taxes, commutation	
Rentals of leased railways	
Payments to sinking and other special funds	
Other deductions from income	
Total charges and deductions from income	
Net divisible income	
Dividends declared........per cent. on $	
Dividends declared........per cent. on $	
Total dividends declared	
Surplus or deficit for the year ending June 30, 191	
Amount of surplus or deficit, June 30, 191	
Credits to profit and loss account during the year	
Total credits	

Debits to profit and loss account during the year		
Total debits		
Net amount credited to profit and loss		
Total surplus or deficit, June 30, 191		

EARNINGS AND EXPENSES OF OPERATION

Receipts from passengers carried	$27,022 79
" Paid out and re-imbursed by city	7,951 73
" carriage of express and parcels	
" carriage of freight	
" tolls for use of tracks by other companies	
" rentals of buildings and other property	
" advertising in cars	343 75
" interest on deposits	
Other earnings from operation—Miscellaneous	97 26
Sales of scrap iron and copper, etc	1,204 74
Gross earnings from operation	$36,620 27
Expenses of Operation:	
General Expenses:	
Salaries of general officers and clerks and attendants	1,927 00
General office expenses and supplies	729 98
Legal expenses	
Insurance	1,755 42
Switching charges, if any	
Other general expenses	62 90
Maintenance of Roadbed and buildings:	
Repair of roadbed and track	5,297 76
Repair of electric line construction	
Repair of buildings	
Maintenance of equipment:	
Repair of cars	
Repair of electric equipment of cars	
Repair of miscellaneous equipment	
Provender and stabling	
Transportation expenses:	
Cost of electric motive power and light; less power sold, and fuel	5,317 60
Wages and compensation of persons employed in conducting transportation	29,103 98
Removal of snow and ice	20 03
Damages for injuries to persons and property	
Tolls for trackage over other railways	
Rentals of buildings and other property	11.00
Other transportation expenses	
Total operating expenses	$44;225 67

PROPERTY ACCOUNTS—ADDITIONS AND DEDUCTIONS DURING THE YEAR

Additions to railway:		
Extension of tracks (length........feet)		
New electric line construction (length........feet)		
Other additions to railway	None	
Total additions to railway		
Additions to equipment:		
Additional cars (........in number)		
Electric equipment of same		
Other additional rolling stock		
Other additions to equipment	None	
Total additions to equipment		

Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc.		
Additional equipment of power stations	None	
Other new buildings necessary for operation of railway		
Total additions to land and buildings		
Additions to other permanent property		
Total additions to other permanent property		
Total additions to property accounts		
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts):		
	None	
Total deductions from property accounts		
Net addition to property accounts for the year		

General Balance Sheet

Assets

Cost of railway:		
Roadbed and tracks		
Electric line construction, including poles, wiring, feeder lines, etc.		
Interest accrued during construction of railway		
Engineering and other expenses incident to construction		
Other items of railway cost		
Total cost of railway owned		$50,930 00
Cost of equipment:		
Passenger cars and other rolling stock		
Electric equipment of same		
Other items of equipment		
Total cost of equipment owned		73,814 00
Cost of land and buildings:		
Land necessary for operation of railway		
Electric power stations, including equipment		
Other buildings necessary for operation of railway		
Total cost of land and buildings owned		25,000 00
Other permanent property		
Total cost of other permanent property owned		
Total permanent investments		$149,744 00
Cash and current assets:		
Cash		
Bills and accounts receivable		
Sinking and other special funds		
Other cash and current assets		
Total cash and current assets		
Miscellaneous assets:		
Materials and supplies		
Other assets and property		
Total miscellaneous assets		
Profit and loss balance—deficit		
Total		$149,744 00

LIABILITIES

Capital stock, common	
preferred	
Total capital stock	
Funded debt	
Real estate mortgages—Debentures outstanding	$146,862 95
Current liabilities:	
Loans and notes payable	
Audited vouchers and accounts	
Salaries and wagesr	
Dividends not called for	
Matured interest coupons unpaid	
Rentals due and unpaid	
Miscellaneous current liabilities	
Total current liabilities	
Accrued liabilities:	
Interest accrued and not yet due	
Taxes accrued and not yet due	
Rentals accrued and not yet due	
Miscellaneous accrued liabilities	
Total accrued liabilities	
Sinking and other special funds	
Total sinking and other special funds	
Profit and loss balance—surplus	
Total	$146,862 95

CAPITAL STOCK—REAL ESTATE MORTGAGES

Owned and operated by the municipality of St. Thomas.

REAL ESTATE MORTGAGES

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, etc.:	
Number of passengers paying revenue carried during the year	664,522
Number carried per mile of main railway track operated	880,607
Number of car miles run—5 cars run 140 miles each per day, or	219,100
Average number of persons employed	20
If the company commenced operation during the year, give the date	
Average amount received from each passenger	About 4 cents
Amount of passenger earnings per mile of road	12,00
Freight:	
Number of tons freight earning revenue	
Number of tons freight carried per mile of road	
Average amount received for each ton of freight	
Average receipts per ton of freight per mile	
Average rate of speed of passenger cars per hour	10 to 12 miles per hr.
Average rate of speed of freight cars per hour	

Description of Equipment

No. of motor cars	10
Trailer cars	4
Snow plows	1
Equipped with fenders	All
Equipped with electric heater	All

Miscellaneous Equipment

	Total number
Barges and omnibuses	
Carts and snow sleds	
Other railway rolling stock	
Other highway vehicles	
Horses	
Other items of equipment	

DESCRIPTION OF RAILWAY OWNED AND OPERATED

Railway Owned, Leased and Operated (by Electric Power)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	7½ miles			7½ miles	7½ miles
Length of second main track					
Total length of main track	7½ miles				
Length of sidings, switches, etc.	400 ft.				
Total, computed as single track					
Length of line under construction	None				

Description of Freight Carried

Description of Road Bed, Etc.

Names of the several cities and towns in which the railways operated by the Company are located:

GRADE CROSSINGS WITH RAILROADS, ETC.

Grade Crossings with Railroads	Unprotected	How Protected	Number of tracks at Crossing	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (......in number), viz.:				
With London & Port Stanley Ry, at Elm St.		2		
With London & Port Stanley Ry, at Wellington St.		2		
With Pere Marquette, at Wilson Ave.		3		
With L. & P. Stanley Ry., st Talbot St.		2		
No. junctions with other railways				
No. of overhead bridges	3			
No. of highway crossings				
Height of overhead bridges above rail level	13′ 6″			
Radius of sharpest curve	45°			
No. of feet per mile of heaviest gradient	3			
Gauge of railway	4′ 8″			
Width of devil strip	4′ at siding			
Total number of tracks at crossings				
Number of above crossings at which frogs are inserted in the tracks				

SUMMARY OF ACCIDENTS TO PROPERTY

None

ACCIDENTS TO PERSONS

Killed and Injured	From causes beyond their own control		From their own misconduct or carelessness		Total	
	Killed	Injured	Killed	Injured	Killed	Injured
Passengers						
Employees		2				2
Other persons						
Totals		2				2

WAGES STREET RAILWAY CO.'S OR RADIAL RAILWAYS

	No. Employed	Average No. of hours on duty per day	Wages per day
Inspectors			
Conductors and motormen—One-man cars	10	8½	$4.25
Starters			
Roadmen	5		
Linemen			
Engineers			
Blacksmiths	1		
Firemen	1		
Electricians			
Armature winders			
Machinists and mechanics			
Car cleaners			
Average number of employees	17		
Watchmen			
Switchmen and crossing tenders			

CORPORATE ORGANIZATION

Corporate name and address of the company:

St. Thomas Municipal Street Railway, City Hall, St. Thomas, Ont.

Names and business address of principal officers:

Treasurer and Secretary—Willie E. Lang, City Hall.
Clerk of Corporation—W. B. Doherty.
Auditor—W. T. Gough, St. Thomas, Ont.
General Manager and Superintendent—C. H. Johns.

Names and residence of Board of Directors:

Colin A. Walker, Esq., 166 Ross Street.
Mayor F. L. Brinkman, 79 Elgin Street.

ANNUAL REPORT OF THE

SARNIA STREET RAILWAY COMPANY, LIMITED

FOR THE YEAR ENDING JUNE 30, 1920

GENERAL INFORMATION

Name of municipality or municipalities in which railway operates: City of Sarnia, Township of Sarnia and Village of Point Edward.
Name of company: Sarnia Street Railway Company, Limited.
Date of incorporation: March 24th, 1874.
Dates of subsequent legislation:
Date of expiry of franchise: January 1st, 1931.
Amount paid to municipality per year per mile of track: Nil.
Further amounts, if any, paid to municipality by way of percentage earnings, % on $: Nil.
Total amount paid municipality during year for franchise: Nil.
Appraised value of plant and tracks for purposes of taxation: Fixed assessment.
Total taxes paid during year to municipality: $1,072.28.
Amount of aid received from municipality, if any: Nil.
Power consumed per car mile in kilowatt hours:
Cost per horse power for motive power used in operating plant:
Cost of power per kilowatt per hour: 1½c.
Cost of power per car mile:
Average speed of cars: 12 miles.
State if power is purchased or generated by company: Purchased.
State if power is generated by steam or water power: Hydro-Electric.
Give number of power houses: One.

GENERAL EXHIBIT FOR THE YEAR

Gross earnings from operation		$96,040 39
Operating expenses		87,803 08
Net earnings from operation		8,237 31
Miscellaneous income		
Total miscellaneous income		
Gross income above operating expenses		8,237 31

Charges upon income accrued during the year:

Interest on funded debt		4,772 50	
Interest and discount on unfunded debts and loans			
Taxes, municipal and township	$1,072 28		
Taxes, provincial			
Taxes, commutation			
		$1,072 28	
Rentals of leased railways			
Payments to sinking and other special funds			
Other deductions from income			
Total charges and deductions from Income			5,844 78
Net divisible income			$2,392 53
Dividends declared........per cent. on $			
Dividends declared—Six per cent. on $9,0000.00		5,400 00	
Total dividends declared			5,400 00
Deficit for the year ending June 30, 1920			$3,007 47
Amount of surplus, June 30, 1919			68,028 55
Credits to profit and loss account during the year			
Total credits			
Debits to profit and loss account during the year			
Total debits			
Net amount credited to profit and loss			
Total surplus, June 30, 1920			$65,021 08

Earnings and Expenses of Operation

Earnings from Operation:

Receipts from passengers carried	$76,814 58
" carriage of mails	2,294 00
" carriage of express and parcels	3,304 46
" carriage of freight	8,301 33
" tolls for use of tracks by other companies	
" rentals of buildings and other property	
" advertising in cars	
" interest on deposits	
Other earnings from operation—Commission G.T.R. tickets	3,811 73
Rents, etc.	1,514 29
Gross earnings from operation	$96,040 39

Expenses of Operation:

General Expenses:

Salaries of general officers and clerks and attendants	4,783 00
General office expenses and supplies	384 08
Legal expenses	
Insurance	1,582 74
Switching charges, if any	
Other general expenses—Discount, printing and advertising	1,299 59

Maintenance of Roadbed and buildings:

Repair of roadbed and track	18,617 84
Repair of electric line construction	82 21
Repair of buildings	247 82

Maintenance of equipment:

Repair of cars—Wages—Electricians	4,713 70
Repair of electric equipment of cars	5,500 20
Repair of miscellaneous equipment	2,034 43
Provender and stabling	1,474 48

Transportation expenses:	
Cost of electric motive power, $9,851.11; less power sold, $......; net	9,851 11
Wages and compensation of persons employed in conducting transportation	23,265 37
Removal of snow and ice	
Damages for injuries to persons and property	270 00
Tolls for trackage over other railways	
Rentals of buildings and other property	
Other transportation expenses—Wages—teamsters, watchman shop expense, main. of park and miscellaneous	14,768 79
Total operating expenses	$88,875 36

Property Accounts—Additions and Deductions During the Uear

Additions to railway:		
Extension of tracks (length........feet)		
New electric line construction (length........feet)		
Other additions to railway		
Pavement	798 89	
Total additions to railway		798 89
Additions to equipment:		
Additional cars (........in number)		
Electric equipment of same		
Other additional rolling stock		
Other additions to equipment		
Wheels, gongs, horse, wagon	703 21	
Total additions to equipment		703 21
Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc.		
Additional equipment of power stations		
Other new buildings necessary for operation of railway		
Total additions to land and buildings		
Additions to other permanent property		
Total additions to other permanent property		
Total additions to property accounts		
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts):		
Total deductions from property accounts		
Net addition to property accounts for the year		$1,502 10

General Balance Sheet

Assets

Cost of railway:		
Roadbed and tracks	$108,187 70	
Electric line construction, including poles, wiring, feeder lines, etc.	17,899 44	
Interest accrued during construction of railway		
Engineering and other expenses incident to construction		
Other items of railway cost		
Total cost of railway owned		$126,087 14
Cost of equipment:		
Passenger cars and other rolling stock	21,642 54	
Electric equipment of same	38,237 35	
Other items of equipment		
Total cost of equipment owned		59,879 89

Cost of land and buildings:		
Land necessary for operation of railway—Park	17,278 36	
Electric power stations, including equipment	26,847 28	
Other buildings necessary for operation of railway office and barns.	27,364 82	
Total cost of land and buildings owned		65,490 46
Other permanent property		
Total cost of other permanent property owned		
Total permanent investments		$251,457 49
Cash and current assets:		
Cash	2,526 41	
Bills and accounts receivable		
Sinking and other special funds		
Other cash and current assets		
Total cash and current assets		2,526 41
Miscellaneous assets:		
Materials and supplies		
Other assets and property		
Total miscellaneous assets		
Profit and loss balance—deficit		
Total		$253,983 90

LIABILITIES

Capital stock, common		$90,000.00
preferred		
Total capital stock		$90,000 00
Funded debt		90,000 00
Real estate mortgages		
Current liabilities:		
Loans and notes payable	8,000 00	
Audited vouchers and accounts		
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities		
Total current liabilities		8,000 00
Accrued liabilities:		
Interest accrued and not yet due		
Taxes accrued and not yet due		
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		
Sinking and other special funds		
Total sinking and other special funds		
Profit and loss balance—surplus		65,983 95
Total		$253,983 95

CAPITAL STOCK—REAL ESTATE MORTGAGES

Capital Stock:

Capital stock authorized by law, common		$100,00000	
preferred			
Total capital stock authorized by law		100,000 00	
Capital stock authorized by votes of company, common		90,000 00	
preferred			
Total capital stock authorized by vote		90,000 00	
Capital stock issued and outstanding, common			$90,000 00
preferred			
Total capital stock outstanding			$90,000 00
Amount paid in on........shares not yet issued			
Amount paid in on stock to be exchanged			
Scrip convertible into stock			
Other paid stock liability			
Total capital stock liability			$90,000 00
Number of shares issued and outstanding, common	1,800		
preferred			
Total number of shares outstanding	1,800		
Number of stockholders, common	69		
preferred			
Total number of stockholders	69		
Amount of stock held, common		90,000 00	
preferred			
Total stock held		90,000 00	

REAL ESTAFE MORTGAGES

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

Description of Bonds, etc.	Rate of interest	Day of Maturity	Outstanding Amount	Interest paid during the year
Five year debenture issued November 10, 1915, interest payable on May 10th and November 10th, in each year	5%	Nov. 10, 20	$90,000 00	$4,772 50
Totals			$90,000 00	$4,772 50

SINKING AND OTHER SPECIAL FUNDS

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, Etc.:

Number of passengers paying revenue carried during the year	1,437,370
Number carried per mile of main railway track operated	155,391
Number of car miles run	205,694
Average number of persons employed	36
If the company commenced operation during the year, give the date	
Average amount received from each passenger	5.3c
Amount of passenger earnings per mile of road	$8,304 21

Freight:

Number of tons freight earning revenue	10,376
Number of tons freight carried per mile of road	
Average amount received for each ton of freight	80c
Average receipts per ton of freight per mile	
Average receipts per ton of freight per mile	
Average rate of speed of passenger cars per hour	12 miles
Average rate of speed of ffeight cars per hour	

DESCRIPTION OF EQUIPMENT

	Box passenger cars	Open passenger cars
No. of motor cars	10	..
Trailer cars	..	2
Baggage and mail express cars	1	..
Equipped with fenders	11	
Equipped with stoves	10	

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses	
Carts and snow sleds	
Other railway rolling stock	
Other highway vehicles	
Horses	4
Other items of equipment	
Freight and baggage, delivery wagons	5
Motor trucks	2

DESCRIPTION OF RAILWAY OWNED AND OPERATED

RAILWAY OWNED, LEASED AND OPERATED (BY ELECTRIC POWER)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	8¼				
Length of second main track					
Total length of main track	8¼				
Length of sidings, switches, etc.	1				
Total computed as single track	9¼				9¼ miles
Length of line under construction					

DESCRIPTION OF FREIGHT CARRIED

DESCRIPTION OF ROAD BED, ETC.

Rails		Weight per yard		No. ties per mile	General Remarks
Steel	Iron	Steel	Iron		
		56		2,112	
		60			

Names of the several cities and towns in which the railways operated by the Company are located: Sarnia and Point Edward.

GRADE CROSSINGS WITH RAILROADS, ETC.

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks at Crossing	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (three in number), viz.:				
With Grand Trunk Ry. at Exmouth St. in City of Sarnia and St. Clair Ave., in Village of Point Edward		Derail and Semaphore	One	
With Grand Trunk Ry., on private right right of way in township of Sarniz	One		One	
With Grand Trunk Ry., at Christina St. South, in City of Sarnia		Derail and Semaphore	One	
No. junctions with other railways	None			
No. of overhead bridges	None			
No. of highway crossings	None			
Height of overhead bridges above rail level	None			
Radius of sharpest curve	90 degrees			
No. of feet per mile of heaviest gradient				
Gauge of railway	4′ 8½″			
Width of devil strip	5 ft.			
Total number of tracks at crossings			Three	Nil
Number of above crossings at which frogs are inserted in the tracks				

SUMMARY OF ACCIDENTS TO PERSONS

ACCIDENTS TO PERSONS

WAGES STREET RAILWAY CO.'S OR RADIAL RAILWAYS

	No. Employed	Average No. of hours on duty per day	Wages per day		
			1st Yr.	2nd Yr.	3rd Yr.
Inspectors					
Conductors	12	10	4.50	4.50	4.50
Motormen	12	10	4.50	4.50	4.50
Starters					
Roadmen	6	10	4.00	4.00	4.00
Linemen	1	10	4.50	4.50	4.50
Engineers					
Blacksmiths					
Firemen					
Electricians	2	10	4.50	and	5.50
Armature winders					
Machinists and mechanics					
Car cleaners	2	10	4.00	and	4.50
Average number of employees	36				
Watchmen	1	10	3.00	3.00	3.00
Switchmen and crossing tenders					

CORPORATE ORGANIZATION

Corporate name and address of the company:

Sarnia Street Railway Company, Limited, Sarnia, Ont.

Names and business address of principal officers:

President—Robert Mackenzie, Sarnia, Ont.

Vice-President—Randall Kenny, Sarnia, Ont.

Treasurer—G. E. Wadland, Sarnia, Ont.

General Counsel—Hanna, LeSueur & McKinley.

Auditor—H. W. Unsworth and James Miller.

General Manager—G. E. Wadland.

Name of officer, and address, to whom correspondence regarding this report should be addressed:

G. E. Wadland, Manager, Secretary-Treasurer, Sarnia, Ont.

Names and residence of Board of Directors:

Robert Mackenzie, Sarnia, Ont.

Randall Kenny, Sarnia, Ont.

Chas. S. Ellis, Sarnia, Ont.

R. V. LeSueur, Sarnia, Ont.

Malcolm Mackenzie, Sarnia, Ont.

W. R. Paul, Sarnia, Ont.

John E. Smallman, London, Ont.

ANNUAL REPORT OF THE
SUDBURY, COPPER CLIFF SUBURBAN ELECTRIC RAILWAY COMPANY

For the Year Ending June 30, 1920

GENERAL INFORMATION

Name of municipality or municipalities in which railway operates: Sudbury and Copper Cliff.

Name of company: Sudbury, Copper Cliff Suburban Electric Railway.

Date of incorporation:

Dates of subsequent legislation:

Date of expiry of franchise:

Amount paid to municipality per year per mile of track: Nil.

Further amounts, if any, paid to municipality by way of percentage earnings, % on $: Nil.

Total amount paid municipality during year for franchise: Nil.

Appraised value of plant and tracks for purposes of taxation:

Total taxes paid during year to municipality:

Amount of Aid received from municipality, if any: Nil.

Power consumed per car mile in kilowatt hours: .008.

Cost per horse power for motive power used in operating plant: $25.00.

Cost of power per kilowatt per hour: Flat rate as above.

Cost of power per car mile: .02c.

Average speed of cars: 10 miles per hour.

State if power is purchased or generated by company: Purchased.

State if power is generated by steam or water power: Water.

Give number of power houses: One.

General Exhibit for the Year

Gross earnings from operation			$52,574 06
Operating expense			43,340 31
Net earnings from operation			9,233 75
Miscellaneous income			
Total miscellaneous income			
Gross income above operating expenses			9,233 75
Charges upon income accrued during the year:			
Interest on funded debt		4,500 00	
Interest and discount on unfunded debts and loans		1,329 20	
Taxes, municipal	$108 42		
Taxes, Provincial			
Taxes, commutation			
		108 42	
Rentals of leased railway			
Payments to sinking and other special funds			
Other deductions from income			
Total charges and deductions from income			5,937 62

Net divisible income	$3,296 13
Dividends declared........per cent. on $	
Dividends declared........per cent. on $	
Total dividends declared	
Surplus or deficit for the year ending June 30, 191	
Amount of surplus or deficit, June 30, 191	
Credits to profit and loss account during the year	
Total credits	
Debits to profit and loss account during the year	
Total debits	
Net amount credited to profit and loss	
Total surplus or deficit, June 30, 1920	$3,296 13

EARNINGS AND EXPENSES OF OPERATION

Earnings from operation:	
Receipts from passengers carried	$52,574 06
“ carriage of mails	
“ carriage of express and parcels	
“ carriage of freight	
“ tolls for use of tracks by other companies	
“ rentals of buildings and other property	
“ advertising in cars	
“ interest on deposits	
Other earnings from operation	
Gross earnings from operation	52,574 06
Expenses of operation:	
General expenses:	
Salaries of general officers and clerks and attendants	1,907 51
General office expenses and supplies	1,834 40
Legal expenses	
Insurance	2,922 91
Switching charges, if any	
Other general expenses	375 73
Maintenance of roadbed and buildings:	
Repair of roadbed and track	4,045 30
Repair of electric line construction	6 50
Repair of building	99 80
Maintenance of equipment:	
Repair of cars	4,340 93
Repair of electric equipment of cars	
Repair of miscellaneous equipment	38 25
Provender and stabling	14 69
Transportation expenses:	
Cost of electric motive power, $........; less power sold, $........; net	5,000 40
Wages and compensation of persons employed in conducting transportation	21,252 27
Removal of snow and ice	1,501 62
Damages for injuries to persons and property	
Tolls for trackage over other railways	
Rentals of buildings and other property	
Other transportation expenses	
Total operating expenses	$43,340 31

Property Accounts—Additions and Deductions during the Year

Additions to railway:		
Extension of tracks (length........feet)		
New electric line construction (length........feet)		
Other additions to railway		
Total additions to railway		
Additions to equipment:		
Additional cars (1 in number)	5,728 45	
Electric equipment of same		
Other additional rolling stock—Snow plow	7,717 57	
Other additions to equipment		
Total additions to equipment		$13,446 02
Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc.		
Additional equipment of power stations		
Other new buildings necessary for operation of railway	561 93	
Total additions to land and buildings		561 93
Additions to other permanent property		
Total additions to other permanent property		
Total additions to property accounts		
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts):		
Total deductions from property accounts		
Net addition to property accounts for the year		$14,007 95

General Balance Sheet

Assets

Cost of railway:		
Roadbed and tracks	$116,737 55	
Electric line construction, including poles, wiring, feeder lines, etc.	29,724 19	
Interest accrued during construction of railway	7,102 74	
Engineering and other expenses incident to construction	667 00	
Other items of railway cost	1,853 69	
Total cost of railway owned		$156,085 17
Cost of equipment:		
Passenger cars and other rolling stock	35,243 02	
Electric equipment of same		
Other items of equipment—Franchise	100,000 00	
Total cost of equipment owned		135,243 02
Cost of land and buildings:		
Land necessary for operation of railway	1,750 00	
Electric power stations, including equipment	14,581 68	
Other buildings necessary for operation of railway	1,383 58	
Total cost of land and buildings owned		17,715 26
Other permanent property		
Furniture and fixtures	449 84	
Total cost of other permanent property owned		449 84
Total permanent investments		$309,493 29

Cash and current assets:		
Cash—Draft	256 50	
Bills and accounts receivable		
Sinking and other special funds		
Other cash and current assets		
Total cash and current assets		256 50
Miscellaneous assets:		
Materials and supplies		
Other assets and property		
Total miscellaneous assets		
Profit and loss balance—deficit		
Total		$309,236 79

LIABILITIES

Capital stock, common		$110,500 00
preferred		62,600 00
Total capital stock		$173,100 00
Funded debt		75,000 00
Real estate mortgages		
Current liabilities:		
Loans and notes payable	$23,511 80	
Audited vouchers and accounts	12,417 49	
Salaries and wages	1,044 76	
Dividends not called for		
Matured interest coupons unpaid	2,250 00	
Rentals due and unpaid		
Miscellaneous current liabilities		
Total current liabilities		$39,224 05
Accrued liabilities:		
Interest accrued and not yet due	2,250 00	
Taxes accrued and not yet due		
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		2,250 00
Sinking and other special funds		
Total sinking and other special funds		
Profit and loss balance—surplus		19,662 74
Total		$309,236 79

CAPITAL STOCK—REAL ESTATE MORTGAGES

Capital stock:		
Capital stock authorized by law, common	$187,400 00	
preferred	62,600 00	
Total capital stock authorized by law	$250,000 00	
Capital stock authorized by vote sof company, common	$187,400 00	
preferred	62,600 00	
Total capital stock authorized by vote	250,000 00	
Capital stock issued and outstanding, common		$110,500 00
preferred		62,600 00
Total capital stock outstanding		173,100 00

Amount paid in on........shares not yet issued			
Amount paid in on stock to be exchanged			
Scrip convertible into stock			
Other paid stock liability			
Total capital stock liability			$173,100 00
Number of shares issued and outstanding, common	1,105		
preferred	626		
Total number of shares outstanding	1,731		
Number of stockholders, common	26		
preferred	22		
Total number of stockholders	48		
Amount of stock hold, common		$110,500 00	
preferred		62,600 00	
Total stock held		$173,100 00	

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

Funded Debt—Description of bonds, etc.	Rate of Interest	Day of Maturity	Amount Outstanding	Interest paid during the year
20 years' mortgage bonds guaranteed by the Town of Sudbury	6%	Aug. 1936	$75,000 00	$2,250 00
Totals			$75,000 00	$2,250 00

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, etc.:

Number of passengers paying revenue carried during the year	506,096
Number carried per mile of main railway track operated	63,262
Number of car miles run	139,176
Average number of persons employed	21
If the Company commenced operation during the year, give the date	
Average amount received from each passenger	10.3c
Amount of passenger earnings per mile of road	$6,572 13

Freight:

Number of tons freight earning revenue	
Number of tons freight carried per mile of road	
Average amount received for each ton of freight	
Average receipts per ton of freight per mile	
Average rate of speed of passenger cars per hour	
Average rate of speed of freight cars per hour	

DESCRIPTION OF EQUIPMENT

	Open Passenger Cars
No. of motor cars	5
Snow plows	1

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses	
Carts and snow sleds	
Other railway rolling stock	
Other highway vehicles	
Horses	
Other items of equipment	

DESCRIPTION OF RAILWAY OWNED AND OPERATED

RAILWAY OWNED, LEASED AND OPERATED (BY ELECTRIC POWER)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	7.9			7.9	7.9
Length of second main track					
Total length of main track	7.9			7.9	7.9
Length of sidings, switches, etc.					
Total, computed as single track	7.9			7.9	7.9
Length of line under construction					

DESCRIPTION OF FREIGHT CARRIED

DESCRIPTION OF ROAD BED, ETC.

Rails		Weight per yard		No. ties to mile	General remarks
Steel	Iron	Steel	Iron		
83,424	80lbs.			3,520	

Names of the several cities and towns in which the railways operated by the company are located: Sudbury and Copper Cliff.

GRADE CROSSINGS WITH RAILROADS, ETC.

Grade crossings with railroads	Unprotected	How Protected	Number of Tracks at Crossing	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (........in number), viz.:				
With C.P.R. at Elm St.	2		1	1
With C.P.R. at Copper Cliff Road	2		1	1
With C.P.R. at Elm St.		Interlock-plant		
No. junctions with other railways				
No. of overhead bridges	1			
No. of highway crossings	4			
Height of overhead bridges above rail level	15′			
Radius of sharpest curve	90°			
No. of feet per mile of heaviest gradient				
Gauge of railway	4′ 8½″			
Width of devil strip				
Total number of tracks at crossings				
Number of above crossings at which frogs are inserted in the tracks				None

SUMMARY OF ACCIDENTS TO PROPERTY

ACCIDENTS TO PERSONS

WAGES STREET RAILWAY CO.'S OR RADIAL RAILWAYS

	No. Employed	Average No. of hours on duty per day	Wages per day		
			1st Yr.	2nd Yr.	3rd Yr.
Inspectors					
Conductors	6	9	37½	37½	37½
Motormen	6	9	37½	37½	37½
Starters					
Roadmen	1	10	37½	37½	37½
Linemen					
Engineers					
Electricians	1	10	140.00	month	
Armature winders					
Machinists and mechanics	1	10	110.00	month	
Car cleaners	1	10	110.00	month	
Average number of employees	18	10	50	50	50
Watchmen					
Switchmen and crossing tenders					

CORPORATE ORGANIZATION

Corporate name and address of the company:

Sudbury, Copper Cliff Suburban Electric Railway.

Names and business address of principal officers:

President—James J. Mackey, Sudbury.

Vice-President—Louis Laforest, Sudbury.

Treasurer—Chas. Bibby, Sudbury.

Clerk of Corporation—Chas. Bibby, Sudbury.[5]

General Counsel—Chas. McCrea, Sudbury.

Auditor—Wm. J. Ross, Sudbury.

Name of officer, and address, to whom correspondence regarding this report should be addressed:
C. Bibby, General Superintendent, Sudbury.

Names and residence of Board of Directors:

J. J. Mackey, Sudbury.

L. Laforest, Sudbury.

W. J. Bell, Sudbury.

C. McCrea, Sudbury.

L. O'Connor, Sudbury.

J. C. Clemens, Sudbury.

ANNUAL REPORT OF THE
THURLOW RAILWAY COMPANY

For the Year Ending December 31, 1920.

GENERAL INFORMATION

Name of municipality or municipalities in which railway operates: Township of Thurlow, County of Hastings, Ontario.
Name of company: Thurlow Railway Company.
Date of incorporation: April 11, 1907.
Dates of subsequent legislation:
Date of expiry of franchise:
Amount paid to municipality per year per mile of track:
Further amounts, if any, paid to municipality by way of percentage earnings, % on $.
Total amount paid municipality during year for franchise:
Appraised value of plant and tracks for purposes of taxation:
Total taxes paid during year to municipality:
Amount of aid received from municipality, if any:
Power consumed per car mile in kilowatt hours:
Cost per horse power for motive power used in operating plant:
Cost of power per kilowatt per hour:
Cost of power per car mile:
Average speed of cars:
State if power is purchased or generated by company:
State if power is generated by steam or water power: Steam.
Give number of power houses:

General Exhibit for the Year

Gross earnings from operation			$41,050 00
Operating expenses			61,021 24
Net earnings from operation			$19,971 24
Miscellaneous income—Interest		$2,334 90	
Total miscellaneous income			2,334 90
Gross income above operating expenses			$17,636 34
Charges upon income accrued during the year:			
Interest on funded debt			
Interest and discount on unfunded debts and loans			
Taxes, municipal			
Taxes, provincial	26.71		
Taxes, commutation			
		26 71	
Rentals of leased railways			
Payments to sinking and other special funds			
Other deductions from income			
Total charges and deductions from income			26 71
Net divisible income			$17,663 05
Dividends declared .... per cent. on $			
Dividends declared .... per cent. on $			
Total dividends declared			
Deficit for the Year ending December 31, 1920			$17,663 05

Amount of surplus or deficit, December 31, 1919	$72,854 06
Credits to profit and loss account during the year	
Total credits	
Debits to profit and loss account during the year	
Total debits	
Net amount credited to profit and loss	
Total surplus or deficit, December 31, 1920	$55,191 01

Earnings and Expenses of Operation

Earnings from operation:

Receipts from passengers carried	
" carriage of mails	
" carriage of express and parcels	
" carriage of freight	41,050 00
" tolls for use of tracks by other companies	
" rentals of buildings and other property	
" advertising in cars	
" interest on deposits	
Other earnings from operation	
Gross earnings from operation	$41,050 00

Expenses of operation:

General expenses:	
Salaries of general officers and clerks and attendants	
General office expenses and supplies	
Legal expenses	
Insurance	
Switching charges, if any	
Other general expenses	
Maintenance of Roadbed and buildings:	
Repair of roadbed and track	$29,709 29
Repair of electric line construction	
Repair of buildings	
Maintenance of equipment:	
Repair of cars	
Repair of electric equipment of cars	
Repair of miscellaneous equipment	11,589 55
Provender and stabling	
Transportation expenses:	
Cost of electric motive power, $........; less power sold, $........; net	
Wages and compensation of persons employed in conducting transportation	8,281 40
Removal of snow and ice	
Damages for injuries to persons and property	
Tolls for trackage over other railways	
Rentals of Engine	418 93
Other transportation expenses: Fuel	10,671 70
Material	350 37
Total operating expenses	$61,021 24

Property Accounts—Additions and Deductions during the Year

Additions to railway:

Extension of tracks (length........feet)	
New electric line construction (length........feet)	
Other additions to railway	
Total additions to railway	

Additions to equipment:		
Additional cars (........in number)		
Electric equipment of same		
Other additional rolling stock		
Other additions to equipment		
Total additions to equipment		
Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc.		
Additional equipment of power stations		
Other new buildings necessary for operation of railway		
Total additions to land and buildings		
Additions to other permanent property		
Total additions to other permanent property		
Total additions to property accounts		
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts)		
Total deductions from property accounts		
Net addition to property accounts for the year		

GENERAL BALANCE SHEET

ASSETS

Cost of railway:		
Roadbed and tracks	$26,723 24	
Electric line construction, including poles, wiring, feeder lines, etc		
Interest accrued during construction of railway		
Engineering and other expenses incident to construction		
Other items of railway cost		
Total cost of railway owned		26,723 24
Cost of equipment:		
Cars and other rolling stock	22,648 76	
Electric equipment of same		
Other items of equipment		
Total cost of equipment owned		22,648 76
Cost of land and buildings:		
Land necessary for operation of railway		
Electric power stations, including equipment		
Other buildings necessary for operation of railway	1,013 40	
Total cost of land and buildings owned		1,013 40
Other permanent property		
Total cost of other permanent property owned		
Total permanent investments		$50,385 40
Cash and current assets:		
Cash		
Bills and accounts receivable	$29,805 61	
Sinking and other special funds		
Other cash and current assets		
Total cash and current assets		29,805 61

Miscellaneous assets:		
Materials and supplies		
Other assets and property		
Total miscellaneous assets		
Profit and loss balance—deficit		
Total		$80,191 01

LIABILITIES

Capital stock, common		$25,000 00
preferred		
Total capital stock		$25,000 00
Funded debt		
Real estate mortgages		
Current liabilities:		
Loans and notes payable		
Audited vouchers and accounts		
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities		
Total current liabilities		
Accrued liabilities:		
Interest accrued and not yet due		
Taxes accrued and not yet due		
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		
Sinking and other special funds		
Total sinking and other special funds		
Profit and loss balance—surplus		55,191 01
Total		$80,191 01

CAPITAL STOCK—REAL ESTATE MORTGAGES

Capital Stock:		
Capital stock authorized by law, common	$50,000 00	
preferred		
Total capital stock authorized by law		
Capital stock authorized by votes of company, common	$50,000 00	
preferred		
Total capital stock authorized by vote		
Capital stock issued and outstanding, common		$25,000 00
preferred		
Total capital stock outstanding		$25,000 00
Amount paid in on........shares not yet issued		
Amount paid in on stock to be exchanged		
Scrip convertible into stock		
Other paid stock liability		
Total capital stock liability		$25,000 00

Number of shares issued and outstanding, common	
preferred	
Total number of shares outstanding	
Number of stockholders, common	
preferred	
Total number of stockholders	
Amount of stock held, common	
preferred	
Total stock held	

Funded Debt—Sinking and Other Special Funds

Volume of Traffic—Equipment, Etc.

Volume of Traffic, etc.:

Number of passengers paying revenue carried during the year	
Number carried per mile of main railway track operated	
Number of car miles run	
Average number of persons employed	17
If the company commenced operation during the year, give the date	
Average amount received from each passenger	
Amount of passenger earnings per mile of road	

Freight:

Number of tons freight earning revenue	
Number of tons freight carried per mile of road	
Average amount received for each ton of freight	
Average receipts per ton of freight per mile	
Average rate of speed of passenger cars per hour	
Average rate of speed of freight cars per hour	20 miles

Description of Equipment

	Box passenger cars
Locomotives	3
Box cars	4
Platform cars	2
Coal and dump cars	13

Miscellaneous Equipment

	Total Number
Barges and omnibuses	
Carts and snow sleds	
Other railway rolling stock	
Other highway vehicles	
Horses	
Other items of equipment	

DESCRIPTION OF RAILWAY OWNED AND OPERATED

Railway Owned, Leased and Operated (by Electric Power)

Railway Owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	2,671				2,671
Length of second main track					
Total length of main track	2,671				2,671
Length of sidings, switches, etc.	2,766				2,766
Total, computed as single track	5,437				5,437
Length of line under construction					

DESCRIPTION OF FREIGHT CARRIED

....

....

....

DESCRIPTION OF ROAD BED, ETC.

Rails		Weight per yard		No. Ties to mile	General Remarks
Steel	Iron	Steel	Iron		
All	....	65	....	3,080	80 lb. Rails at all frogs and switches.
....	....	....	....	....	....
....	....	....	....	....	....

GRADE CROSSINGS WITH RAILROADS, ETC.

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks at Crossing	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (......in number), viz.:				
With Canadian National Railway..........	....	Interlocking stand, derails, 1 Semaph'r.	1	....
No. junctions with other railways..........	Two	....	....	....
No. of overhead bridges....................	....	....	....	....
No. of highway crossings..................	One	....	....	....
Height of overhead bridges above rail level..	....	....	....	....
Radius of sharpest curve..................	716.8′	....	....	....
No. of feet per mile of heaviest gradient.....	158.4′	....	....	....
Gauge of railway..........................	4.8½″	....	....	....
Width of devil strip......................	....	....	....	....
Total number of tracks at crossings.....	....	....	....	....
Number of above crossings at which frogs are inserted in the tracks..............	....	....	....	....

GENERAL REMARKS AND EXPLANATIONS

The above mentioned curve is on our main line. One of our siding curves has a radius of 193.2

SUMMARY OF ACCIDENTS TO PROPERTY

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ACCIDENTS TO PERSONS

Killed and Injured	From causes beyond their control		From their own misconduct or carelessness		Total	
	Killed	Injured	Killed	Injured	Killed	Injured
Passengers						
Employees		1				1
Other persons						
Totals		1				1

WAGES STREET RAILWAY VO.'S OR RADIAL RAILWAYS

....
....
....

CORPORATE ORGANIZATION

Corporate name and address of the company:
Thurlow Railway Company, 273 Craig Street, Montreal, Que.

Names and business address of principal officers:
President—F. P. Jones.
Vice-President—H. L. Doble.

Name of officer, and address, to whom correspondence regarding this report should be addressed:
H. L. Doble, Secretary-Treasurer, c/o Canada Cement Co., Ltd., Montreal.

Names and residence of Board of Directors:
F. P. Jones, Montreal.
H. L. Doble, Montreal.
C. C. Ballantyne, Montreal.
A. C. Tagge, Montreal.
A. C. Bedford-Jones, Montreal.

ANNUAL REPORT OF THE TORONTO RAILWAY COMPANY

FOR THE YEAR ENDING JUNE 30, 1920

GENERAL INFORMATION

Name of municipality or municipalities in which railway operates: Toronto.
Name of company: The Toronto Railway Company.
Date of incorporation: 14th April, 1892.
Dates of subsequent legislation: 56 Vic., Chap. 101; 63 Vic., Chap. 112; 4 Edw., Chap. 93.
Date of expiry of franchise: 31st August, 1921.
Amount paid to municipality per year per mile of track:
$800.00 a mile single track ....—
$1,600.00 a mile double track ....—$98,793 60
Further amounts, if any, paid to municipality by way of percentage earnings, % on $1,256,515 43
Total amount paid municipality during year for franchise 1,355,309 03
Appraised value of plant and tracks for purposes of taxation ....
Total taxes paid during year to municipality ....
Amount of aid received from municipality, if any ....
Power consumed per car mile in kilowatt hours ....
Cost per horse power for motive power used in operating plant ....
Cost of power per kilowatt per hour ....
Cost of power per car mile ....
Average speed of cars ....
State if power is purchased or generated by company: Purchased and Steam Reserve.
State if power is generated by steam or water power: Purchased Hydraulic-generated Steam.
Give number of power houses: 1 Power House, 5 Sub-stations, 3 Store Battery Plants.

GENERAL EXHIBIT FOR THE YEAR

Gross earnings from operation			$7,691,336 21
Operating expenses			6,526,833 34
Net earnings from operation			$1,164,502 87
Miscellaneous income:			
Interest on $217,000 short term notes paid by Toronto Power Co.		$33,062 50	
Total miscellaneous income			33,062 50
Gross income above operating expenses			$1,197,565 37
Charges upon income accrued during the year:			
Interest on funded debt		114,346 18	
Interest and discount on unfunded debts and loans, S.T.notes		33,062 50	
Taxes, municipal	$148,807 27		
Taxes, provincial	12,059 51		
Taxes, commutation			
		160,866 78	
Rentals of leased railways			
Payments to sinking and other special funds:			
Injuries and damages Ins. Fund included in operating expenses			
Other deductions from income:			
Percentages to city	$1,256,515 43		
Pavement charges	98,793 60		
Sundries	9,000 00		
Income war tax	12,000 00		
		$1,376,309 03	
Total charges and deductions from income			$1,684,584 49
Net divisible income			
Dividends declared........per cent. on $			
Dividends declared........per cent. on $			
Total dividends declared			
Deficit for the year ending June 30, 1920			$487,019 12
Amount of surplus or deficit, June 30, 1919			
Credits to profit and loss account during the year			
Total credits			
Debits to profit and loss account during the year:			
Total debits			
Net amount credited to profit and loss			
Total surplus or deficit, June 30, 1920			

EARNINGS AND EXPENSES OF OPERATION

Earnings from operation:	
Receipts from passengers carried	$7,561,025 16
" carriage of mails	
" carriage of express and parcels	
" carriage of freight	
" tolls for use of tracks by other companies	
" rentals of buildings and other property	12,308 69
" advertising in cars	50,036 92
" interest on deposits	
Other earnings from operation—Int. and Dis. and Sundries	67,965 44
Gross earnings from operation	$7,691,336 21

Expenses of operation:
General expenses:

Salaries of general officers and clerks and attendants	$143,481 24
General office expenses and supplies	190,777 69
Legal expenses	12,932 85
Insurance	103,614 75
Switching charges, if any	
Other general expenses: Advertising and attractions	11,331 50
Store Expenses	86,093 08
Supt. of warp and structures	12,553 21

Maintenance of roadbed and buildings:

Repair of roadbed and track	188,598 87
Repair of electric line construction	74,611 15
Repair of buildings	35,325 67

Maintenance of equipment:

Supt. of equipment	39,895 66
Steam and electric plant	64,034 27
Repair of cars	451,287 60
Repair of electric equipment of cars	349,803 84
Repair of miscellaneous equipment	73,435 96
Provender and stabling	844 08
Shop expenses	46,452 31

Transportation expenses:

Cost of electric motive power, $......; less power sold, $......; net	941,817 62
Wages and compensation of persons employed in conducting transportation	3,428,115 42
Removal of snow and ice	14,377 55
Damages for injuries to persons and property	236,662 09
Tolls for trackage over other railways	
Rentals of buildings and other property	
Other transportation expenses: Cleaning and sanding track	7,930 83
Air compressors	12,856 10
Total operating expenses	$6,526,833 34

Property Accounts—Additions and Deductions during the Year

Additions to railway:

Extension of tracks (length........feet)	
New electric line construction (length........feet)	
Other additions to railway	
Total additions to railway	

Additions to equipment:

Additional cars (........in number)	
Electric equipment of same	
Other additional rolling stock	
Other additions to equipment	
Total additions to equipment	

Additions to land and buildings:

Additional land necessary for operation of railway	
New electric power stations, including machinery, etc.	
Additional equipment of power stations	
Other new buildings necessary for operation of railway	
Total additions to land and buildings	

Additions to other permanent property:		
Payment made on account of this company's proportion of the new bridge at the Don and the subway at the C.P.R. tracks, Avenue Road		
Total additions to other permanent property		$94,922 03
Total additions to property accounts		
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts)		
Total deductions from property accounts		
Net addition to property accounts for the year		$94,922 03

General Balance Sheet

Assets

Cost of railway:		
Roadbed and tracks		
Electric line construction, including poles, wiring, feeder lines, etc.		
Interest accrued during construction of railway		
Engineering and other expenses incident to construction		
Other items of railway cost		
Total cost of railway owned		
Cost of equipment:		
Passenger cars and other rolling stock		
Electric equipment of same		
Other items of equipment		
Total cost of equipment owned		
Cost of land and buildings:		
Land necessary for operation of railway		
Electric power stations, including equipment		
Other buildings necessary for operation of railway		
Total cost of land and buildings owned		
Other permanent property		
Total cost of other permanent property owned		
Total permanent investments		$19,741,553 11

Note.—The Company originally purchased the Toronto Street Railway as a going concern and has never charged against capital account detailed headings as per form. The books, therefore, do not enable a statement to be given of the assets of the company otherwise than stated in the annual statement prepared for the shareholders.

Cash and current assets:		
Cash	66,776 04	
Bills and accounts receivable	1,856,998 16	
Sinking and other special funds		
Other cash and current assets—Prepaid accts.	2,823 69	
Suspense items awaiting classification	76,730 23	
Total cash and current assets		$2,003,328 12
Miscellaneous assets:		
Materials and supplies	116,829 00	
Other assets and property		
Total miscellaneous assets		116,829 00
Profit and loss balance—deficit		
Total		$21,861,710 23

LIABILITIES

Capital stock, common		$12,000,000 00
preferred		
Total capital stock		
Funded debt		2,719,306 69
Real estate mortgages		70,000 00
Current liabilities:		
Loans and notes payable		
Audited vouchers and accounts	228,187 65	
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities—Outstanding tickets	356,927 02	
Total current liabilities		585,114 67
Accrued liabilities:		
Interest accrued and not yet due	37,174 68	
Taxes accrued and not yet due		
Rentals accrued and not yet due		
Miscellaneous accrued liabilities—Interest undistributed	38,151 65	
Total accrued liabilities		75,326 33
Sinking and other special funds—Ins. and damages Ins. Fund	324,222 62	
Prov. for renewals	288,909 32	
Reserve for judgments and fines	233,127 36	
Total sinking and other special funds		846,259 30
Profit and loss balance—surplus		$5,565,703 24
Total		$21,861,710 23

CAPITAL STOCK—REAL ESTATE MORTGAGES

Capital stock:			
Capital stock authorized by law, common		$15,000,000 00	
preferred			
Total capital stock authorized by law		15,000,000 00	
Capital stock authorized by votes of company, common			
preferred			
Total capital stock authorized by vote		15,000,000 00	
Capital stock issued and outstanding, common			$12,000,000 00
preferred			
Total capital stock outstanding			$12,000,000 00
Amount paid in on........shares not yet issued			
Amount paid in on stock to be exchanged			
Scrip convertible into stock			
Other paid stock liability			
Total capital stock liability			$12,000,000 00
Number of shares issued and outstanding, common	120,000		
preferred			
Total number of shares outstanding	120,000		
Number of stockholders, common			
preferred			
Total number of stockholders			
Amount of stock held, common			
preferred			
Total stock held			

REAL ESTATE MORTGAGES

Description of mortgaged property	Rate of interest	Mortgage when due	Amount	Interest paid during the year
Toronto Railway Chambers, N.W. corner King and Church Sts.	7%	31 Aug. 1921	$70,000 00	$4,375 00
Totals			$70,000 00	$4,375 00

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

Funded Debt—Description of Bonds, etc.	Rate of Interest	Day of Maturity	Amount Outstanding	Interest paid during the Year
First Mortgage Bonds $35,000 a mile up to $4,555,000	4½%	Aug, 31,'21	$2,502,306	69
Notes—Short term	6%	Dec. 1, '20	217,000	00
Totals			$2,719,306	69

SINKING AND OTHER SPECIAL FUNDS

Amount June 30, 1919, of Provision for renewals fund		$254, 468 82
Injuries and damages insurance fund		242,616 66
Total, June 30, 1919		$497,085 48
Additions during the year to Provision for Renewals fund	$119,100 26	
to injuries and damages ins. fund	239,466 10	358,566 36
Total including additions		$855,651 84
Deductions during the year from Prov. for renewals fund	84,659 76	
Injuries and damages ins. fund	157,860 14	242,519 90
Total sinking and other special funds, June 30, 191		$613,131 94

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, Etc.:

Number of passengers paying revenue carried during the year	192,819,410
Number carried per mile of main railway track operated	
Number of car miles run	21,350,338
Average number of persons employed	
If the Company commenced operation during the year, give the date	
Average amount received from each passenger	3.92c
Amount of passenger earnings per mile of road	

Freight:

Number of tons freight earning revenue	
Number of tons freight carried per mile of road	
Average amount received for each ton of freight	
Average receipts per ton of freight per mile	
Average rate of speed of passenger cars per hour	
Average rate of speed of freight cars per hour	

Description of equipment	No. of motor cars	Trailer cars	Official cars	Electric Locomotives	Baggage and mail express cars	Cattle and box cars	Refrigerator cars	Platform cars	Coal and dump cars	Conductors' vans	Tool cars	Snow plows	Snow sweepers	Equipped with fenders	Equipped with stoves	Equipped with electric heaters
Box passenger cars	710	103	1	1	....	....	....	14	4	....	3	....	17	722	810	....
Open passenger cars	42	43	....	....	....	....	....	....	....	....	....	....	....	....	....	....

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses	
Carts and snow sleds	
Other railway rolling stock: 5 sprinklers	
2 bonding machines	
2 air compressor cars	
Other highway vehicles	
Horses	
Other items of equipment	

DESCRIPTION OF RAILWAY OWNED AND OPERATED

RAILWAY OWNED, LEASED AND OPERATED (BY ELECTRIC POWER)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	61.7745				
Length of second main track	59.4385				
Total length of main track	121.2130				
Length of sidings, switches, etc.	8,3550				
Total, computed as single track	129,5680				
Length of line under construction	None				

DESCRIPTION OF FREIGHT CARRIED

DESCRIPTION OF ROAD BED, ETC.

Rails		Weight per yard		No. ties to Mile	General Remarks
Steel	Iron	Steel	Iron		
6.495		108 G.G.		2640	
60.361		90G		2109	39.519 miles on ties or gravel or crushed st.
3.286		88G		1760	
13.352		80T		2001	48.555 miles on ties on concrete.
21.162		73G		1618	
19.451		70T		737	11.427 miles on ties on concrete slab with
2.316		69G		1972	[cedar blocks
1.242		65T		1625	21.712 miles on ties on steel ties and blocks
1.106		60T		170	[on concrete.
0.450		60G		2112	8.355 miles on ties or ties on various
0.347		56T		2112	[substances
129.568					129.568

Names of the several cities and towns in which the railways operated by the Company are located: City of Toronto.

GRADE CROSSINGS WITH RAILROADS, ETC.

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks at Crossing	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (......in number), viz.:				
With	Operation			
With G.T.R. Queen and Degrasse		Gates and derail	2	2
With G.T.R. Front and John		"	1	2
With C.P.R. Front and Spadina		"	2	2
No. junctions with other railways—5 subways—King St. W., Queen St. W., Gerrard St. E., Avenue Road, Yonge St.				
No. of overhead bridges				
No. of highway crossings				
Height of overhead bridges above rail level				
Radius of sharpest curve				
No. of feet per mile of heaviest gradient				
Gauge of railway				
Width of devil strip				
Total number of tracks at crossings				
Number of above crossings at which frogs are inserted in the tracks				

GENERAL REMARKS AND EXPLANATIONS

Special orders and regulations of Railway Commission of Canada govern above crossings.

SUMMARY OF ACCIDENTS TO PROPERTY

June 30, 1920

Accidents	Due to unavoidable causes		Due to carelessness of employees		Due to carelessness of other persons	
	Serious	Trivial	Serious	Trivial	Serious	Trivial
Damage to Company's property	10	720	35	690	42	3160
Damage to property of Municipality	....	4	1	....	1	5
Damage to private property	111	440	27	147	272	807
Total	121	1164	63	837	315	3972

ACCIDENTS TO PROPERTY

Killed and Injured	From causes beyond their own own control		From their own misconduct or carelessness		Total	
	Killed	Injured	Killed	Injured	Killed	Injured
Passengers	....	210	1	576	1	786
Employees	....	110	4	158	4	268
Other persons	....	254	13	327	13	581
Totals	....	574	18	1061	18	1635

WAGES STREET RAILWAY CO.'S OR RADIAL RAILWAYS

			Wages per day
Inspectors	40	Average	$145 per month
Conductors	1040	8	55c hr. 57½/60c 60c
Motormen	953	8	" " "
Starters	6 Day	8	$150 per month ....
	6 Night	8	$140 per month ....
Roadmen (Trackmen)	93	8	55c to 59c ....
Linemen	10	8	72c to 78c ....
Engineers	1	8	80c ....
Blacksmiths	11	8	60c to 72c ....
Firemen	8	8	68c ....
Electricians (repairmen)	188	8	Same as conductors
Armature winders	7	8	63c to 73c ....
Machinists and mechanics	32	8	71c to 78c ....
Car cleaners and shedmen	112	8	54c 56c ....
Average number of employees	2830	8	....
Watchmen	6	10—13½	$15.00 week
Switchmen and crossing tenders	5	8	$1.50 day

CORPORATE ORGANIZATION

Corporate name and address of the company:
The Toronto Railway Company, King and Church Street, Toronto.

Names and business address of principal officers:
President—Sir William Mackenzie, 43 Victoria Street, Toronto.
Vice-President—Hon. Frederic Nicholls, King and Simcoe Sts., Toronto.
Treasurer—James C. Grace, King and Church St., Toronto.
General Counsel—McCarthy & McCarthy, Canada Life Building.
Auditor—W. S. Andrews & Co.
General Manager—Robert J. Fleming, King and Church St.

Name of officer, and address, to whom correspondence regarding this report should be addressed:
R. J. Fleming, General Manager, Toronto.

Names and residence of Board of Directors:
Sir William Mackenzie, Toronto.
Hon. Frederic Nicholls, Toronto.
Sir Henry M. Pellatt, Toronto.
Edward R. Wood, Toronto.
Frank W. Ross, Quebec.
Geo. H. Smithers, Montreal.
Hugh Mackay, K.C., Montreal.
Hon. C. P. Beanheim, Montreal.
Herman H. Pitts, Ottawa.

ANNUAL REPORT OF THE

TORONTO CIVIC RAILWAY COMPANY

FOR THE YEAR ENDING JUNE 30, 1920

Name of municipality or municipalities in which railway operates: City of Toronto.
Name of Company: Toronto Civic Railway.
Date of incorporation: By-law 5626–5933.
Dates of subsequent legislation: Approval of Ontario Railway and Municipal Board under date June 23rd, 1911.
Date of expiry of franchise:

Amount paid to municipality per year per mile of track........................	
Further amounts, if any, paid to municipality by way of percentage earnings % on $	
Total amount paid municipality during year for franchise....................	
Appraised value of plant and tracks for purposes of taxation....................	
Total taxes paid during year to municipality....................	
Amount of aid received from municipality, if any....................	
Power consumed per car mile in kilowatt hours....................	
Cost per horse power for motive power used in operating plant....................	
Cost of power per kilowatt per hour: $15.00 per H.P. per year A.C. maximum demand plus 9 cts. per K.W., H.D.C. maximum intrigate peak..........	
Cost of power per car mile....................	4.52 cents
Average speed of cars (per hour)....................	9.8 miles

State if power is purchased or generated by company: Purchased.
State if power is generated by steam or water power: Water power.
Give number of power houses: three sub-stations.

GENERAL EXHIBIT FOR THE YEAR

Gross earnings from operation....................		$499,484 19
Operating expenses....................		515,400 59
Net deficit from operation....................		$15,916 40
Miscellaneous income....................		
Total miscellaneous income....................		
Gross deficit above operating expenses....................		$15,916 40

Charges upon income accrued during the year:

Interest on funded debt		$107,570 40	
Interest and discount on unfunded debts and loans			
Taxes, municipal			
Taxes, provincial			
Taxes, commutation			
Rentals of leased railways			
Payments to sinking and other special funds			
Sinking fund reserve	$60,737 00		
Instalment Loan Reserve	11,500 00		
		$72,237 03	
Other deductions from income			
Total charges and deductions from income			$179,807 43
Net divisible income—deficit for year			$195,723 83
Dividends declared........per cent. on $			
Dividends declared........per cent. on $			
Total dividends declared			
Deficit for the year ending June 30, 1920			$195,723 83
Amount of surplus or deficit, June 30, 191 (see footnote)			
Credits to profit and loss account during the year			
Total credits			
Debits to profit and loss account during the year			
Total debits			
Net amount credited to profit and loss			
Total surplus or deficit, June 30, 191			

This deficit is merged in the City's general accounts. The City fiscal year properly closes on December 31st.

EARNINGS AND EXPENSES OF OPERATION

Earnings from operation:

Receipts from passengers carried	$497,864 19
" carriage of mails	
" carriage of express and parcels	
" carriage of freight	
" tolls for use of tracks by other companies	
" rentals of buildings and other property	
" advertising in cars	1,620 00
" interest on deposits	
Other earnings from operation	
Gross earnings from operation	$499,484 19

Expenses of operation:
General Expenses:

Salaries of general officers and clerks and attendants	$22,060 57
General office and supplies	75 86
Legal expenses	
Insurance—Amount credited, overcharged in last year's report, cr.	2,660 29
Switching charges, if any	
Other general expenses—Stationery, advertising, telephones	
General store expense and general miscellaneous charges	11,138 69

Maintenance of roadbed and buildings:	
Repair of roadbed and track	$10,146 78
Repair of electric line construction	3,339 06
Repair of buildings	1,945 69
Maintenance of equipment:	
Repair of cars	34,035 10
Repair of electric equipment of cars	9,632 23
Repair of miscellaneous equipment	864 36
Provender and stabling	2,467 67
Transportation expenses:	
Cost of electric motive power, $.......; less power sold, $........; net	86,674 70
Wages and compensation of persons employed in conducting transportation	314,134 91
Removal of snow and ice	785 36
Damages for injuries to persons and property	2,588 89
Tolls for trackage over other railways	
Rentals of buildings and other property	
Other transportation expenses—Interlocking plants, car house expense and other transportation expenses	18,171 01
Total operating expenses	$515,400 59

PROPERTY ACCOUNTS—ADDITIONS AND DEDUCTIONS DURING THE YEAR

Additions to railway:		
Extension of tracks (length........feet)	$31,911 09	
New electric line construction (length........feet)	2,154 14	
Other additions to railway		
Total additions to railway		34,065 23
Additions to equipment:		
Additional cars (........in number)		
Electric equipment of same		
Other additional rolling stock	231 19	
Other additions to equipment		
Total additions to equipment		231 19
Additions to land and buildings:		
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc.		
Additional equipment of power stations		
Other new buildings necessary for operation of railway		
Total additions to land and buildings		
Additions to other permanent property		
Total additions to other permanent property		
Total additions to property accounts		
Deductions from property accounts (property sold or reduced in valuation and credited to property accounts)		
Adjustment of accounts	$14,337 14	
Total deductions from property accounts		$14,337 14
Net addition to property accounts for the year		$19,959 01

General Balance Sheet

Assets

Cost of railway:		
Roadbed and tracks	$966,286 96	
Electric line construction, including poles, wiring, feeder lines, etc.	104,076 40	
Interest accrued during construction of railway	106,161 91	
Engineering and other expenses incident to construction		
Other items of railway cost—Injuries and damages and miscellaneous expenses	31,213 86	
Total cost of railway owned		$1,207,739 13
Cost of equipment:		
Passenger cars and other rolling stock	262,552 61	
Electric equipment of same	125,504 44	
Other items of equipment		
Total cost of equipment owned		388,057 05
Cost of land and buildings:		
Land necessary for operation of railway	232,115 62	
Electric power stations, including equipment, machinery	15,042 72	
Other buildings necessary for operation of railway	141,660 10	
Total cost of land and buildings owned		388,818 44
Other permanent property		
Total cost of other permanent property owned		
Total permanent investments		
Cash and current assets:		
Cash	445,574 32	
Bills and accounts receivable		
Sinking and other special funds	496,294 47	
Other cash and current assets		
Total cash and current assets		941,868 79
Miscellaneous assets:		
Materials and supplies	45,813 24	
Other assets and property—Mimico, Scarboro and Queen St. East	143,312 75	
Total miscellaneous assets		189,125 99
Profit and loss balance—deficit		[illegible]
Total		$3,115,609 40

Liabilities

Capital stock, common		
preferred		
Total capital stock		[illegible]
Funded debt		$2,552,737 00
Real estate mortgages		
Current liabilities:		
Loans and notes payable		
Audited vouchers and accounts	$31,062 71	
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities		
Unredeemed tickets	5,515 22	
Total current liabilities		36,577 93

Accrued liabilities:		
Interest accrued and not yet due		
Taxes accrued and not yet due		
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		
Sinking and other special funds		
Sinking fund reserve	$496,294 47	
Instalment loan reserve	30,000 00	
Total sinking and other special funds		$526,294 47
Profit and loss balance—surplus		
Total		$3,115,609 40

CAPITAL STOCK—REAL ESTATE MORTGAGES

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

Funded debt—Description of bonds, etc.	Rate of Interest	Day of Maturity	Amount Outstanding	Interest paid during the year
City of Toronto Consolidated Loan Debentures, By-law 5626	4%	July 1, 1936	$1,157,293 00	$46,291 72
5933	4%	July 1, 1936	139,488 00	5,579 52
7150	4½%	July 1, 1948	65,488 00	2,946 96
7826	5%	June 1918–37	133,000 00	6,900 00
7269	4½%	July 1, 1936	455,961 00	20,518 25
7451	4½%	July 1, 1936	108,696 00	4,891 32
7822	5%	June 1918–27	14,000 00	775 00
7824	5%	Sept. 1, 1920-37	119,000 00	6,200 00
8178	5½%	Sept. 1, 1920-29	204,000 00	5,610 00
6867	4½%	July 1, 1943	89,393 00	4,022 69
7270	4½%	July 1, 1935	66,418 00	2,988 81
Totals			$2,552,737 00	$106,724 19

SINKING AND OTHER SPECIAL FUNDS

Amount June 30, 1919, of sinking fund (per last report)	$406,488 86
Amount June 30, 1919, of.......fund	
Total, June 30, 191	
Additions during the year to sinking fund (including adjustment)	89,805 61
Additions during the year to........fund	
Total including additions	
Deductions during the year from........fund	
Deductions during the year from........fund	
Total sinking and other special funds, June 30, 191	$496,294 47

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, Etc.:	
Number of passengers paying revenue carried during the year	29,540,925
Number carried per mile of main railway track operated	1,474,907
Number of car miles run	1,917,521.8
Average number of persons employed	225
If the company commenced operation during the year, give the date	
Average amount received from each passenger	1.685 cents
Amount of passenger earnings per mile of road	$24,857.16

Freight:

Number of tons freight earning revenue	
Number of tons freight carried per mile of road	
Average amount received for each ton of freight	
Average receipts per ton of freight per mile	
Average rate of speed of passenger cars per hour	
Average rate of speed of freight cars per hour	

DESCRIPTION OF EQUIPMENT

	Box Passenger cars
Snow plows	3
Equipped with fenders	45
Equipped with stoves	45

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses	
Carts and snow sleds	
Other railway rolling stock	
Other highway vehicles—Auto trucks	2
Dray	1
Horses	1
Other items of equipment—Overhead repair wagons	2

DESCRIPTION OF RAILWAY OWNED AND OPERATED

RAILWAY OWNED, LEASED AND OPERATED (BY ELECTRIC POWER)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	10,260				
Length of second main track	9,769				
Total length of main track	20,029				
Length of sidings, switches, etc.	1,603				
Total, computed as single track	21,632				21,632
Length of line under construction					

DESCRIPTION OF FREIGHT CARRIED

DESCRIPTION OF ROAD BED, ETC.

Rails		Weight per yard		No. Ties to mile	GENERAL REMARKS
Steel	Iron	Steel	Iron		
		80		1,760	Lorain Section 80–335—7″ T rail
		90		2,640	" 90–392—7″ G rail.
		122		2,640	" 122–467—7″ G rail.

Names of the several cities and towns in which the railways operated by the company are located: City of Toronto—outside the city limits of 1891.

GRADE CROSSINGS WITH RAILROADS, ETC.

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks at Crossing	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (......in number), viz.:			G.T.R.	T.C.R.
With Grand Trunk Rly. siding on Danforth Ave. East of Main St.		With derailing switch & interlocking plant	1	2
With			T.S.R.	T.C.R.
With Toronto Suburban Rly. at Davenport and Lansdowne Ave.		Signal system with interlocking derail switch agai'st T.C.R.	1	2
No. junctions with other railways	6			
No. of overhead bridges				
No. of highway crossings				
Height of overhead bridges above rail level				
Radius of sharpest curve	40′			
No. of feet per mile of heaviest gradient	417.648 or	7.91%		
Gauge of railway	4′ 10....″			
Width of devil strip	5′ 4″			
Total number of tracks at crossings			2	4
Number of above crossings at which frogs are inserted in the tracks				

NATURE OF ACCIDENTS

	Total
Collision with cars	8
Collision with autos	42
Collision with cycles and motorcycles	2
Collision with wagons	8
Boarding cars	2
Alighting from cars	1
Derailment of cars	7
Miscellaneous	6
Total of all accidents	76
Personal Injuries—(all degrees)—	
To passengers	7
To others	7
Totals	14
Fatal—	
To passengers	0
To others	1
Totals	1

SUMMARY OF ACCIDENTS TO PROPERTY

ACCIDENTS TO PERSONS

WAGES STREET RAILWAY CO.'S OR RADIAL RAILWAYS

	No. Employed	Average No. of hours on duty per day	Wages per day		
			1st Yr.	2nd Yr.	3rd Yr.
Inspectors	7	8½	68	68	68
Conductors	93	8¼	60—63	66	66
Motormen	85	8¼	60—63	66	66
Starters	9	8	$5.20		
Roadmen					
Linemen	1	8	67		
Engineers					
Blacksmiths	1	8	78		
Firemen					
Electricians					
Armature winders	3	8	75½		
Machinists and mechanics	6	8	78		
	13	8	66		
Car cleaners	14	8	60		
Average number of employees	225				
Watchmen					
Switchmen and crossing tenders					

CORPORATE ORGANIZATION

Corporate name and address of the company:
Corporation of the City of Toronto—Toronto Civic Railway, City Hall, Toronto, Ont.

Names and business address of principal officers:
General Manager—R. C. Harris.

Name of officer, and address, to whom correspondence regarding this report should be addressed:
R. C. Harris, Commissioner of Works, City Hall, Toronto.

ANNUAL REPORT OF THE TORONTO AND YORK RADIAL RAILWAY COMPANY

FOR THE YEAR ENDING JUNE 30, 1920

GENERAL INFORMATION

Name of municipality or municipalities in which railway operates: City of Toronto, York Township, Markham, Vaughan, Richmond Hill, Aurora, Newmarket, King, Whitchurch, North and East Gwillimbury, Etobicoke, Scarboro Township, Mimico, New Toronto.
Name of Company: The Toronto and York Radial Railway Company.
Date of incorporation: 1898.
Dates of subsequent legislation:
Date of expiry of franchise:
Amount paid to municipality per year per mile of track: Nil.
Further amounts, if any, paid to municipality by way of percentage earnings, % on $: Nil.
Total amount paid municipality during year for franchise:
Appraised value of plant and tracks for purposes of taxation:
Total taxes paid during year to municipality: $10,816.87.
Amount of aid received from municipality, if any: None.
Power consumed per car mile in kilowatt hours:
Cost per horse power for motive power used in operating plant:
Cost of power per kilowatt per hour:
Cost of power per car mile:
Average speed of cars: 20 miles per hour.
State if power is purchased or generated by company: Purchased.
State if power is generated by steam or water power:
Give number of power houses: Six.

General Exhibit for the Year

Gross earnings from operation			$964,784 97
Operating expenses			794,009 08
Net earnings from operation			$170,775 89
Miscellaneous income			
Total miscellaneous income			
Gross income above operating expenses			$170,775 89
Charges upon income accrued during the year:			
Interest on funded debt		$20,500 00	
Interest and discount on unfunded debts and loans		135,704 65	
Taxes, municipal	$10,816 87		
Taxes, provincial	1,082 55		
Taxes, commutation		11,899 42	
Rentals of leased railways			
Payments to sinking and other special funds			
Other deductions from income			
Terminal expenses	$40,783 44		
		40,783 44	
Total charges and deductions from income			$208,887 51
Net divisible income			
Dividends declared........per cent on $			
Dividends declared........per cent on $			
Total dividends declared			
Deficit for the year ending June 30, 1920			$38,111 62
Amount of surplus, June 30, 1919			$264,554 17
Credits to profit and loss account during the year			
Total credits			
Debits to profit and loss account during the year			
Total debits			
Net amount credited to profit and loss			
Total surplus, June 30, 191			$226,442 55

Earnings and Expenses of Operation

Earnings from operation:	
Receipts from passengers carried	$812,868 52
" carriage of mails	3,503 48
" carriage of express and parcels—Mimico and Scarboro	1,403 29
" carriage of freight	104,762 42
" tolls for use of tracks by other companies	
" rentals of buildings and other property	1,062 00
" advertising in cars	1,300 00
" interest on deposits	
Other earnings from operation:	
Sale of power for lighting	37,241 93
Sale of gravel and sand	17 55
Revenue from parks, etc.	2,625 28
Gross earnings from operation	$964,784 47

Expenses of operation:

General expenses:	
Salaries of general officers and clerks and attendants	$22,297 60
General office expenses and supplies	5,916 49
Advertising	482 39
Legal expenses	884 61
Insurance	10,062 80
Stationery and printing	1,681 20
Store expense	4,527 70
Other general expenses—Miscellaneous general expenses	107,626 91
Power and Light expenses	7,668 32
Shop expenses	257 97
Maintenance of roadbed and buildings:	
Repair of roadbed and track—Including bridges and culverts	67,972 59
Repair of electric line construction—Including telephone line	14,821 06
Repair of buildings	6,500 22
Maintenance of equipment:	
Repair of cars	59,955 48
Repair of electric equipment of cars	58,783 41
Repair of miscellaneous equipment—Including tools and machinery	29,532 30
Cartage expenses	15,362 51
Steam and electric plant	4,156 82
Transportation expenses:	
Cost of electric motive power, $........; less power sold, $........; net	95,322 01
Wages and compensation of persons employed in conducting transportation	156,362 25
Removal of snow and ice	9,718 41
Track cleaning and sanding	10,939 56
Damages for injuries to persons and property	
Air compressor	2,556 52
Rentals of buildings and other property	2,300 00
Other transportation expenses—Freight expenses	33,785 21
Miscellaneous car house and car service expenses	64,534 74
Total operating expenses	$794,009 08

PROPERTY ACCOUNTS—ADDITIONS AND DEDUCTIONS DURING THE YEAR

Additions to railway:		
Extension of tracks (length........feet)	$4,845 19	
New electric line construction (length........feet)	1,614 77	
Other additions to railway		
Bridges and culverts	116 38	
Total additions to railway		6,576 34
Additions to equipment:		
Additional cars (........in number)	954 25	
Electric equipment of same		
Other additional rolling stock		
Other additions to equipment		
Miscellaneous equipment	9,618 92	
Total additions to equipment		10,573 17
Additions to land and buildings—Real estate and building	28,233 95	
Additional land necessary for operation of railway		
New electric power stations, including machinery, etc.		
Additional equipment of power stations	280 70	
Other new buildings necessary for operation of railway		
Total additions to land and buildings		28,514 65
Additions to other permanent property:		
Office furniture	411 00	
Total additions to other permanent property		411 00
Total additions to property accounts		46,075 16

Deductions from property accounts (property sold or reduced in valuation and credited to property accounts):		
Uncompleted and undistributed expenditure on capital accounts reduced by	46,694 29	
Right of Way (N. Toronto terminal)	7,500 00	
Total deductions from property accounts		54,194 29
Net addition to property accounts for the year		

General Balance Sheet

Assets

Cost of railway:		
Road and equipment account	$2,659,676 33	
Roadbed and tracks—Including right of way, bridges, etc.	1,528,470 76	
Electric line construction, including poles, wiring, feeder lines, etc.	277,499 33	
Interest accrued during construction of railway		
Engineering and other expenses incident to construction		
Other items of railway cost		
Total cost of railway owned		$4,465,646 42
Cost of equipment:		
Passenger cars and other rolling stock, including misc. equipment	393,700 65	
Electric equipment of same	231,663 56	
Other items of equipment—Tools and machinery	12,835 91	
Compressor plant	14,195 22	
Total cost of equipment owned		652,395 34
Cost of land and buildings:		
Land necessary for operation of railway—Real estate and buildings	292,023 20	
Electric power stations, including equipment—Power plant	130,189 34	
Other buildings necessary for operation of railway		
Total cost of land and buildings owned		422,212 54
Other permanent property—Office furniture	3,097 59	
Park amusement equipment	621 75	
Total cost of other permanent property owned		3,719 34
Total permanent investments		
Cash and current assets:		
Cash	26,868 09	
Bills and accounts receivable	107,085 73	
Sinking and other special funds	4,858 11	
Othern cash and current assets		
Total cash and current assets		138,811 93
Miscellaneous assets:		
Materials and supplies	78,156 84	
Other assets and property—Mortgages on real estate	11,900 00	
Uncompleted and undistributed expenditure on capital account	24,484 25	
Total miscellaneous assets		114,541 09
Profit and loss balance—deficit		
Total		$5,797,326 66

Liabilities

Capital stock, common	$2,000,000 00
preferred	
Total capital stock	
Funded debt	
Real estate mortgages	12,700 00

Current liabilities:		
Loans and notes payable	$3,517,681 10	
Audited vouchers and accounts	25,322 45	
Salaries and wages—Unclaimed	365 80	
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid	75 00	
Miscellaneous current liabilities		
Tickets for redemption	3,500 00	
Total current liabilities		$3,546,944 35
Accrued liabilities:		
Interest accrued and not yet due		
Taxes accrued and not yet due	3,202 87	
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		3,202 87
Sinking and other special funds		
Contingent account for renewals	8,036 89	
Total sinking and other special funds		8,036 89
Profit and loss balance—surplus		226,442 55
Total		$5,797,326 66

Capital Stock—Real Estate Mortgages

Capital stock:			
Capital stock authorized by law, common		$2,000,000 00	
preferred			
Total capital stock authorized by law			
Capital stock authorized by votes of company, common		$2,000,000 00	
preferred			
Total capital stock authorized by vote			
Capital stock issued and outstanding, common		$2,000,000 00	
preferred			
Total capital stock outstanding			$2,000,000 00
Amount paid in on........shares not yet issued			
Amount paid in on stock to be exchanged			
Scrip convertible into stock			
Other paid stock liability			
Total capital stock liability			
Number of shares issued and outstanding, common	20,000		
preferred			
Total number of shares outstanding	20,000		
Number of stockholders, common			
preferred			
Total number of stockholders—All held by Toronto Rly. Co.			
Amount of stock held, common			
preferred			

REAL ESTATE MORTGAGES

Description of mortaged property	Rate of Interest	Mortgage when due	Amount	Interest paid during the year
Haig Property, North Toronto........	6%	Dec. 7	$6,700 00	$402 00
Scarboro Park.....................	6%	Sep. 15, 1920	6,000 00	360 00
....	....	....	....	....
Totals.....................	....	....	$12,700 00	$762 00

FUNDED DEBT—SINKING AND OTHER SPECIAL FUNDS

Funded Debt—Description of Bonds, etc.	Rate of Interest	Day of Maturity	Amount Outstanding	Interest paid during the year
*First Mortgage Gold Bonds...........	5%	Oct. 1, 1919	....	$20,500 00
....	....	....	....	....
....	....	....	....	....

*Note.—The above bonds were redeemed on October 1st, 1919, and a temporary bond issued for $2,500,000.00; same having been delivered to our bankers as collateral for loans.

VOLUME OF TRAFFIC—EQUIPMENT, ETC.

Volume of Traffic, etc.:

Number of passengers paying revenue carried during the year............	9,963,292
Number carried per mile of main railway track operated—72.17 miles.....	138,053
Number of car miles run—Passenger..................................	1,638,619.64
Freight..................................	101,703.34c
Average number of persons employed..................................	400
If the company commenced operation during the year, give the date.......	
Average amount received from each passenger..........................	.08.15c
Amount of passenger earnings per mile of road (82 miles)...............	9,620.34

Freight:

Number of tons freight earning revenue................................	41,681
Number of tons freight carried per mile of road (52.26 miles—Met. Div.)...	797.56
Average amount received for each ton of freight........................	$2.51
Average receipts per ton of freight per mile of main track (52.26 miles)....	4.80 cents
Average rate of speed of passenger cars per hour........................	20 miles
Average rate of speed of freight cars per hour..........................	15 miles

Description of equipment	No. of motor cars	Trailer cars	Official cars	Electric Locomotives	Baggage and mail express cars	Cattle and Box cars	Refrigerator cars	Platform cars	Coal and dump cars	Conductors' vans	Tool cars	Snow plows	Snow sweepers	Equipped with fenders	Equipped with stoves	Equipped with electric heaters
Box passenger cars..	49	....	1	1	11	....	....	15	....	....	10	4	....	66	....	50
Open passenger cars.	3	....	....	....	....	....	....	....	....	....	....	....	....	3	....	....

MISCELLANEOUS EQUIPMENT

	Total Number
Barges and omnibuses	
Carts and snow sleds	
Other railway rolling stock—Bonding car	1
Other highway vehicles	
Horses	7
Other items of equipment—Wagons and sleighs	9
Motor Trucks	7
Automobiles	2

DESCRIPTION OF RAILWAY OWNED AND OPERATED

RAILWAY OWNED, LEASED AND OPERATED (BY ELECTRIC POWER)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	68.97	3.20		72.17	72.17
Length of second main track					
Total length of main track	68.97	3.20		72.17	72.17
Length of sidings, switches, etc.	9.83				
Total, computed as single track	78.80	3.20		82.00	82.00
Length of line under construction					

DESCRIPTION OF FREIGHT CARRIED

For Year ending June 30, 1920

Flour	Grain	Live Stock	Lumber	Fuel	All other Articles	Total Tonnage
Tons	Tons	Tons	Tons	Tons		
447	1401	442	1696	3025	34,670	41,681

DESCRIPTION OF ROAD BED, ETC.

Rails		Weight per yard		No. ties to mile	General remarks
Steel	Iron	Steel	Iron		
		56–60–80		2,700	

Names of the several cities and towns in which the railways operated by the company are located: Toronto, Thornhill, Richmond Hill, Aurora, Newmarket, Dunsville, Keswick Jackson's Point, Sutton, New Toronto, Mimico, Port Credit, Scarboro, West Hill.

GRADE CROSSINGS WITH RAILROADS, ETC.

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks at Crossing	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (......in number), viz.:				
With Grand Trunk Rly.—Jackson's Point		Interlocker	1	
With Grand Trunk Rly.—Port Credit	Yes	(G.T.Rly. Switch)		
No. junctions with other railways: 4 C.N.R. G.T.R., S. & A.R. and Toronto Ry.				
No. of overhead bridges: 3				
No. of highway crossings				
Height of overhead bridges above rail level				
Radius of sharpest curve				
No. of feet per mile of heaviest gradient				
Gauge of railway: 4′ 8½″; 4′ 10....″				
Width of devil strip				
Total number of tracks at crossings				
Number of above crossings at which frogs are inserted in the tracks				

SUMMARY OF ACCIDENTS TO PROPERTY

....

....

....

ACCIDENTS TO PERSONS

Killed and Injured	From causes beyond their own control		From their own misconduct or carelessness		Total	
	Killed	Injured	Killed	Injured	Killed	Injured
Passengers						
Employees						
Other persons	1		1		2	
Totals	1		1		2	

WAGES STREET RAILWAY CO.'S OR RADIAL RAILWAYS

	No. Employed	Average No. of hours on duty per day	Wages per hour		
			1st Yr.	2nd Yr.	3rd Yr.
Inspectors					
Conductors	70	10	38	40	42
Motormen	65	10	38	40	42
Starters					
Roadmen	45	10	37½		45
Linemen	9	10	37½		50
Engineers	2	10	40		55
Blacksmiths	3	10	50		55
Firemen					
Electricians	5	8	40	to	50
Armature winders	2	10	35	to	60
Machinists and mechanics	45	10	50	to	65
Car cleaners	6	10	35	to	40
Average number of employees	400				
Watchmen	3	12	35	to	40
Switchmen and crossing tenders					

CORPORATE ORGANIZATION

Names and business address of principal officers:
President—Sir William Mackenzie.
Vice-President—Hon. Frederic Nicholls.
Secretary-Treasurer—J. C. Grace.
General Counsel—Aylesworth, Wright, Moss & Thompson.
Comptroller—J. M. Smith.
General Manager—W. H. Moore.
Asst. General Manager—C. L. Wilson.

Name of officer, and address, to whom correspondence regarding this report should be addressed:
Chas. L. Wilson, Assistant Manager, Toronto.

Names and residence of Board of Directors:
Sir William Mackenzie, Toronto.
Hon. Frederic Nicholls, Toronto.
Sir Henry Pellatt, Toronto.
E. R. Wood, Toronto.
Hon. C. P. Beaubien, Montreal.
F. W. Ross, Quebec.

ANNUAL REPORT OF THE

WATERLOO-WELLINGTON RAILWAY COMPANY

FOR THE YEAR ENDING JUNE 30, 1920

GENERAL INFORMATION

Name of municipality or municipalities in which railway operates: Kitchener, Ontario, and Township of Waterloo.
Name of company: The Waterloo-Wellington Railway Company.
Date of incorporation: 12th December, 1901, as Berlin & Bridgeport Electric Street Railway Company, Limited.
Dates of subsequent legislation: Act of Ontario Legislature, March 18, 1920, changing name to The Berlin & Northern Railway Company Act, Ontario Legislature, April 16, 1919, changing name to The Waterloo-Wellington Railway Company.
Date of expiry of franchise: April 11, 1922, and part June 29, 1937.
Amount paid to municipality per year per mile of track........................
Further amounts, if any, paid to municipality by way of percentage earnings, % on $
Total amount paid municipality during year for franchise....................
Appraised value of plant and tracks for purposes of taxation....................
Total taxes paid during year to municipalities.................................. 626 80
Amount of aid received from municipality, if any...............................

Power consumed per car mile in kilowatt hours.................................
Cost per horse power for motive power used in operating plant..................
Cost of power per kilowatt per hour..
Cost of power per car mile...
Average speed of cars..........................About 7 miles per hour.............
State if power is purchased or generated by Company: Purchased.
State if power is generated by steam or water power: Hydro-Electric.
Give number of power houses:

GENERAL EXHIBIT FOR THE YEAR

Gross earnings from operation		$11,820 59
Operating expenses (not including taxes)		10,800 53
Net earnings from operation		$1,020 06
Miscellaneous income		
Total miscellaneous income		
Gross income above operating expenses		

Charges upon income accrued during the year:			
Interest on funded debt		2,919 00	
Interest and discount on unfunded debt and loans		545 97	
Taxes, municipal	$626 80		
Taxes, provincial		32 60	
Taxes, commutation		659 40	
Rentals of leased railways			
Payments to sinking and other special funds			
Other deductions from income			
Total charges and deductions from income			$4,124 37
Net divisible income			$3,104 31
Dividends declared........per cent. on $			
Dividends declared........per cent. on $			
Total dividends declared			
Deficit for the year ending June 30, 191			$3,104 31
Amount of surplus or deficit, June 30, 191			
Credits to profit and loss account during the year			
Total credits			
Debits to profit and loss account during the year			
Total debitsr			
Net amount credited to profit and loss			
Total surplus or deficit, June 30, 191			

Earnings and Expenses of Operation

Earnings from operation:	
Receipts from passengers carried	$11,353 46
“ carriage of mails	244 00
“ carriage of express and parcels	55 13
“ carriage of freight	
“ tolls for use of tracks by other companies	
“ rentals of buildings and other property	18 00
“ advertising in cars	150 00
“ interest on deposits	
Other earnings from operation	
Gross earnings from operation	$11,820 59
Expenses of operation	
General expenses:	
Salaries of general officers and clerks and attendants	1,670 65
General office expenses and supplies	60 80
Legal expenses	
Insurance	468 06
Switching charges, if any	
Other general expenses	444 61
Loss due to accident (1919)	666 86
Maintenance of roadbed and buildings:	
Repair of roadbed and track	764 15
Repair of electric line construction	
Repair of buildings	59 67
Maintenance of equipment:	
Repair of cars	
Repair of electric equipment of cars	1,536 70
Repair of miscellaneous equipment	70 80
Provender and stabling	

Transportation expenses:

Cost of electric motive power, $........; less power sold, $........; net....		
Wages and compensation of persons employed in conducting transportation...		
Removal of snow and ice		2,491 65
Damages for injuries to persons and property		268 03
Tolls for trackage over other railways		
Rentals of buildings and other property		
Other transportation expenses—Track rental and power		2,298 55
Total operating expenses		$10,800 53

GENERAL BALANCE SHEET

ASSETS

Cost of railway:

Roadbed and tracks	—	
Electric line construction, including poles, wiring, feeder lines, etc.	$47,013 60	
Interest accrued during construction of railway		
Engineering and other expenses incident to construction	1,241 87	
Other items of railway cost		
Total cost of railway owned		$48,255 47

Cost of equipment:

Passenger cars and other rolling stock	— 7,639 77	
Electric equipment of same	—	
Other items of equipment		
Total cost of equipment owned		7,639 77

Cost of land and buildings:

Land necessary for operation of railway	8,390 23	
Electric power stations, including equipment		
Other buildings necessary for operation of railway	7,643 58	
Total cost of land and buildings owned		$16,033 81

Other permanent property		
Office furniture	27 13	
Tools	595 27	
Total cost of other permanent property owned		622 40
Total permanent investments		

Cash and current assets:

Cash		
Bills and accounts receivable		
Sinking and other special funds		
Other cash and current assets—Accumulated deficit charge to capital stock	6,205 14	
Total cash and current assets		6,205 14

Miscellaneous assets:

Materials and supplies		
Other assets and property		
Total miscellaneous assets		
Profit and loss balance—deficit		3,104 31
Total		$81,860 90

LIABILITIES

Capital stock, common		$19,200 00
preferred		
Total capital stock		
Funded debt		53,000 00
Real estate mortgages		
Current liabilities:		
Loans and notes payable	9,660 90	
Audited vouchers and accounts		
Salaries and wages		
Dividends not called for		
Matured interest coupons unpaid		
Rentals due and unpaid		
Miscellaneous current liabilities		
Total current liabilities		9,660 90
Accrued liabilities:		
Interest accrued and not yet due		
Taxes accrued and not yet due		
Rentals accrued and not yet due		
Miscellaneous accrued liabilities		
Total accrued liabilities		
Sinking and other special funds		
Total sinking and other special funds		
Profit and loss balance—surplus		
Total		$81,860 40

CAPITAL STOCK—REAL ESTATE MORTGAGES

Capital Stock:		
Capital stock authorized by law, common	$400,000 00	
preferred		
Total capital stock authorized by law		
Capital stock authorized by votes of company, common	$400,000 00	
preferred		19,200 00
Total capital stock authorized by vote		
Capital stock issued and outstanding, common		
preferred		
Total capital stock outstanding		$19,200 00
Amount paid in on........shares not yet issued		
Amount paid in on stock to be exchanged		
Scrip convertible into stock		
Other paid stock liability		
Total capital stock liability		
Number of shares issued and outstanding, common		
preferred		
Total number of shares outstanding		
Number of stockholders, common		
preferred		
Total number of stockholders		
Amount of stock held, common		
preferred		
Total stock held	$19,200 00	

Funded Debt—Sinking and Other Special Funds

Funded Debt—Description of Bonds, etc.	Rate of interest	Day of Maturity	Amount Outstanding	Interest paid during the year
First Mortgage Bonds	6%		$53,000 00	

Volume of Traffic—Equipment, Etc.

Volume of Traffic, Etc.:

Number of passengers paying revenue carried during the year	230,900
Number carried per mile of main railway track operated	70,400
Number of car miles run	35,800
Average number of persons employed on cars	3
If the company commenced operation during the year, give the date	
Average amount received from each passenger	4.9c
Amount of passenger earnings per mile of road	$3,490.00

Freight:

Number of tons freight earning revenue	
Number of tons freight carried per mile of road	
Average amount received for each ton of freight	
Average receipts per ton of freight per mile	
Average rate of speed of passenger cars per hour	7 miles
Average rate of speed of freight cars per hour	

Description of Equipment

	Box Passenger cars
No. of motor cars	3
Equipped with electric heaters	1

Miscellaneous Equipment

	Total Number
Barges and omnibuses	
Carts and snow sleds	
Other railway rolling stock—Steel dump cars	3
Hand cars, etc.	4
Other highway vehicles	
Horses	
Other items of equipment	

DESCRIPTION OF RAILWAY OWNED AND OPERATED

Railway Owned, Leased and Operated (by Electric Power)

Railway owned, etc.	Owned	Held under lease or contract	Trackage over other railways	Total owned, leased, etc.	Total operated
Length of railway line	2.8		1	3.8	3.45 miles
Length of second main track					
Total length of main track					
Length of sidings, switches, etc.					
Total, computed as single track					
Length of line under construction					

Description of Freight Carried

DESCRIPTION OF ROAD BED, ETC.

Rails		Weight per yard		No. Ties to mile	General Remarks
Steel	Iron	Steel	Iron		
....	....	60 to 65 lbs.	....	2,600	Continued gravelling track
....	....	....	....	....	....
....	....	....	....	....	....

GRADE CROSSINGS WITH RAILROADS, ETC.

Grade Crossings with Railroads	Unprotected	How Protected	Number of Tracks at Crossing	
			Railroad Tracks	Railway Tracks
Crossings of railways with railroads at grade (2 in number), viz.:				
With G.T.R. spur line, Lancaster St......	....	....	....	....
With Bridgeport........	....	....	....	....
....	....	Semaphore	1	1
With G.T.R. siding at Laura St.,Kitchener	....	Semaphore and derail	1	1
No. junctions with other railways........	1	....	....	....
No. of overhead bridges........	1	....	....	....
No. of highway crossings........	4	....	....	....
Height of overhead bridge above rail level.	22.5′	....	....	....
Radius of sharpest curve........	50′	....	....	....
Heaviest gradient 3% except on short run to Margaret Ave. bridge........	....	....	....	....
Gauge of railway........	....	....	....	....
Width of devil strip........	....	....	....	....
Total number of tracks at crossings...	....	....	....	....
Number of above crossings at which frogs are inserted in the tracks........	....	....	....	....

GENERAL REMARKS AND EXPLANATIONS

Junction with Kitchener-Waterloo Street Railway at Water St., Kitchener. Bridge over Grand Trunk Railway, Margaret Ave., Kitchener.

WAGES STREET RAILWAY CO.'S OR RADIAL RAILWAYS

	No. Employed	Average No. of hours on duty per	Wages per day		
			1st Yr.	2nd Yr.	3rd Yr.
Inspectors........	....	....	....	....	....
Conductors........					
Motormen........	3	10	$2.90	to	$3.65
Starters........	....	....	40c to 45	c for extr	a time.
Roadmen........					
Linemen........	1 to 3	....	$3.50 to	$4.50 d	ay
Engineers........	....	....	....	....	....
Blacksmiths........	....	....	....	....	....
Firemen........	....	....	....	....	....
Electricians........	....	....	....	....	....
Armature winders........	....	....	....	....	....
Machinists and mechanics........	....	....	....	....	....
Car cleaners........	....	....	....	....	....
Average number of employees........	....	....	....	....	....
Watchmen........	....	....	....	....	....
Switchmen and crossing tenders........	....	....	....	....	....

CORPORATE ORGANIZATION

Corporate name and address of the company:
The Waterloo-Wellington Railway Company, 90 King St. West, Kitchener, Ont.

Names and business address of principal officers:
President—William H. Breithaupt, Kitchener, Ont.
Vice-President—George M. Sheik, Bridgeport Ont.
Treasurer—Joseph H. Wuest, Kitchener, Ont.
Superintendent—L. D. Leyes, Kitchener, Ont.

Names and residence of Board of Directors:
William H. Breithaupt, Kitchener, Ont.
Louis J. Breithaupt, Kitchener, Ont.
George M. Shirk, Bridgeport, Ont.
M. B. Bauman, Kitchener, Ont.
Harvey J. Sims, Kitchener, Ont.
Joseph H. Wuest, Kitchener, Ont.

ANALYSIS OF GROSS EARNINGS AND MISCELLANEOUS INCOME FOR THE YEAR ENDING JUNE 30, 1920

Name of Railway	From Passengers	From Mail	From Express Parcels and Newspapers	From Freight	From Rentals of track, buildings and other prop'ty	From Advertising	From other miscellaneous sources	Total
	$ c	$ c	$ c	$ c	$ c	$ c	$ c	$ c
Cornwall Street	27,329 48	966 12		22,543 39	516 00	622 88	1,244 87	53,222 74
Fort William	180,210 20	902 50				941 00	32,789 43	214,843 13
Guelph Radial	69,402 55			3,988 25	250 00		5,060 02	78,700 82
Hamilton and Dundas	84,192 73	248 00	891 89	124 29	894 60	100 00	8,390 40	94,841 91
Hamilton, Grimsby and Beamsville	120,484 10	750 00	7,757 45	45,119 80	12,250 05	350 00	836 60	187,548 00
Hamilton Street	949,647 11				5,015 40	725 00	322 15	955,709 66
Hamilton and Barton Incline	See Statement							
Hamilton and Mountain Park	See Statement							
Huntsville and Lake of Bays (Steam) to Dec. 31, 1920	2,929 73	30 00	2,119 30				3,473 16	8,552 19
International Transit	105,015 70					1,610 23	825 16	107,451 09
Kingston, Portsmouth & Cataraqui	68,494 30				850 57	405 00	1,388 56	71,138 43
Kitchener & Waterloo to Dec. 31, 1920	84,984 13	2,909 05	163 98		7,066 95	869 42	171 70	96,165 23
Lake Huron & Northern Ontario				10,874 18				10,874 18
London Street	529,085 38	1,996 42			301 00	3,436 92	1,235 04	536,054 76
Midland and Simcoe	Operated only for switching purposes.							
Mount McKay & Kakabeka Falls to Dec. 31, 1920							27,202 71	27,202 71
Niagara Falls Park and River	171,171 08	555 50	522 35		141 68	619 79	17,262 77	190,273 17
Port Arthur Civic	189,598 08	350 00	2,906 30		278 71	1,137 00	440 52	194,710 61
St. Thomas Civic	27,022 79	7,951 73				343 75	1,302 00	36,620 27
Sarnia Street	76,814 58	3,294 00	3,304 46	8,301 33			5,326 02	96,040 39
Sudbury, Copper Cliff Suburban	52,574 06							52,574 06
Thurlow (Steam) to Dec. 31, 1920				41,050 00			2,334 90	43,384 90
Toronto Railway	7,561,025 16				12,308 69	50,036 92	101,027 94	7,724,398 71
Toronto Civic	497,864 19					1,620 00		499,484 19
Toronto and York Radial	812,868 52	3,503 48	1,403 29	104,762 42	1,062 00	1,300 00	39,884 76	964,784 47
Waterloo, Wellington	11,353 46	244 00	55 13		18 00	150 00		11,820 59

TABULATION OF CAR MILES RUN, PASSENGERS CARRIED, ACCIDENTS, ETC.

FOR YEAR ENDING JUNE 30, 1920

Name of Railway	Length of track owned miles	Length of Switches and sidings miles	Passenger car miles run	Passenger carried	Passengers carried per mile of main track operated	Accidents		Number of Men employed	Passenger Cars		Other Service Cars									Miscell.		Cost of Railway construction, equipment land and buildings per mile of track owned
						Killed	Injured		Enclosed Cars	Open Cars	Tractors	Baggage & Mail	Cattle & Box	Platform	Coal Dump	Tool	Snow Sweepers	Snow Plows	Loading Cranes	Loco'tives	Ferry boats	
Cornwall Street	4	2.5	196,000	626,485	156,621			30	9	1												$34,724 13
Fort William	18,840	9 40	702,531	3,675,25	195,077			73	24		3						1	1				55,207 28
Guelph Radial	8.7		236,984	1,446,371	160,708		1	38	8	3						1	1			1		23,939 37
Hamilton & Dundas	6.048		198,232	1,122,336	160,334		1	33	1	2												29,103 59
Hamilton,Grimsby & B'msville	22.6	3.6	455,672	882,099	39.031	1	5	74	8	2		4										18,854 37
Hamilton Street	33.7		3,033.146	22,655,546	672,271	3	90	395	75	19	14					1	4					67,877 68
Hamilton & Barton Incline	See Stat	ement																				
Hamilton & Mountain Park	See stat	ement																				
Huntsville & Lake of Bays (Steam) to Dec. 31, 1920	1.438	.312	2,800	19,770	19,770			8			1	2		7								16,734 46
International Transit	4.30	.38	259,830	2,172,149	605.05		5	48	9		3						1					56,278 34
Kingston,Portsmouth & Cat'qi	8						2		8							1	2	1				Not reported
Kitch.& Waterloo to Dec.31'20	4.68	.38	204,811	2,065,539	441,351			23	10	2	5					1	1					42,788 01
Lake Huron & Bor. Ont.(Stm.)	17	3		No record		Nil	Nil		1	1				8						1		30,450 00
London Street	36,10		1,861,916	13,728,331	380,285		78		51	9	5						2	2				41,712 20
Midland & Simcoe	Operated	only for	switching	purposes																		
Mount McKay & Kakabeks Falls to Dec. 31, 1920	5.	1.5						10			2				10							74,406 92
Niagara Falls Park & River	* 23.116	9.92	322,943	1,666,534	322,943	1	11	52	11	16		2		2				1				Not reported
Port Arthur Civic	18.53	1.04	702,720	3,859,228	208,269			65	118		4	1						2				40,079 57
St. Thomas Civic	7.5	.075	219,100	664,552	880,607		2		10		4							1				19,768 18
Sarnia Street	8.25	1.	205,694	1,437,370	155,391			36	10		2	1										27,184 59
Sudbury,Copper Cliff Suburb'n	7.9		139,176	506,096	63,262			21		5												39,176 36
Thurlow (Stm.) to Dec. 31,'20	2.671	2.766						17					4	2	13					3		9,267 13
Toronto Railway	61.7745	59.4385	21,350,338	192,819410	1,590,748	18	1635	2830	710	42				14	4	3	17			1		152,364 42
Toronto Civic	20,029	1,603	1,917,521	29,540,925	1,474,907	1	14	225									3					91,744 39
Toronto & York Radial	68.97	9.83	1,638,619	9,963,292	138,053	2		400	49	3		11		15		10		4		1		70,354 99
Wellington-Waterloo	2.8		35,800	230,900	70,400			3	3													25,911 23

*Operated as a Division of The International Railway Company.

TABULATION OF COMPARISON WITH PREVIOUS YEARS AS TO CAR MILES RUN, PASSENGERS CARRIED, ETC.

Name of Railway	Length of Track		Car miles run		Passengers carried		Accidents				Net earnings	
							Killed		Injured			
	In-crease	De-crease	Increase	De-crease	Increase	De-crease	In-crease	De-crease	In-crease	De-crease	Increase	Decrease
Cornwall Street	No ch	ange	7,367	....	126,626	....	......	1	......	4	$6,352 36	....
Fort William Electric	No ch	ange	Not reporte	d last ye	ar		None i	n eith	er year		a3,376 14	....
Guelph Radial	No ch	ange	1,009	....	200,232	....	......	......	1	......	....	b1,147 88
Hamilton & Dundas	No ch	ange	34,715	....	30,390	....	......	2	......	......	....	14,880 98
Hamilton, Grimsby & Beamsville	No ch	ange	35,765	....	....	6,307	1	......	4	......	....	b20,889 51
Hamilton Street	No ch	ange	274,363	....	3,141 099	....	2	......	......	74	29,778 56	....
Hamilton and Barton Incline	See St	atemen	t									
Hamilton and Mountain Park	See St	atemen	t									
Huntsville & Lake of Bays (Steam) to Dec. 31, 1920	No ch	ange	No ch	ange	5,870	....	None	in eith	er year		857 80	....
International Transit	No ch	ange	....	1,081	77,879	....	......	......	......	6	1,779 85	....
Kingston, Portsmouth & Cataraqui	No ch	ange	No chan	ge	....	104,961	......	......	2	......	2,090 54	....
Kitchener and Waterloo to Dec. 31, 1920	No ch	ange	No chan	ge	236,253	....	None	in eith	er year		......	893 10
Lake Huron and Northern Ontario (Stm.)	No ch	ange	No recor	d	No rec	ord	None	in eith	er year		2,030 32	....
London Street	No ch	ange	55,897	....	987,616	....	None i	n eithe	r year	148	c310,47	....
Midland and Simcoe	Operat	ed for	switching	purposes	only							
Mount McKay and Kakabeka Falls to December 31, 1920	No ch	ange	No recor	d	No recor	d	N	o recor	d		12,345 88	....
Niagara Falls Park and River	No ch	ange	46,603	....	369,974	....	1	......	2	......	21,588 76	....
Port Arthur Civic	No ch	ange	46,936	....	....	45,707	2	......	......	......	a8,879 62	....
St. Thomas Civic	.560	......	....	36,100	211,912	....	......	......	......	......	....	b1,204 08
Sarnia Street	No ch	ange	1,450	....	180,656	....	None i	n eith	er year		....	7,860 60
Sudbury, Copper Cliff Suburban	No ch	ange	....	14,289	....	50,615	None i	n eath	er year		....	1,695 36
Thurlow (Steam)	No ch	ange	Not report	ed last y	ear		......	......	......	2	....	17,734 65
Toronto Railway	......	.013	1,198,013	....	23,466,887	....	1	......	144	......	....	974,810 88
Toronto Civic	No ch	ange	218,407	....	7,244 732	....	......	1	......	36	....	b58,511 61
Toronto & York Radial to Sec. 31, 1920	No ch	ange	134,394	56......	2,415,343	....	2	......	......	......	....	64,800 52
Wellington-Waterloo	.35	......	No change	....	29,106	....	......	......	......	1	....	b1,254 89

(a)—Decrease in deficit on year's operation. (b)—Increase in deficit on year's operation.
(c)—Includes $17,649.20—Increased fares as from July 11, 1919, to October 26, 1919.

TABULATION OF OPERATING COSTS FOR THE YEAR ENDING JUNE 30, 1920

Name of Railway	General Expense	Mainten- Roadbed and buildings	Maintenance Equipment	Motive Power	Wages	Damages to persons and property	Miscell- aneous	Total	Operat- ing cost per car mile run
	$ c.	$ c.	$ c.	1 c.	$ c.	$ c.	$ c.	$ c.	cents
Cornwall Street	3,540 72	5,532 20	10,991 72	1,533 96	11,103 57	582 13	3,806 29	37,090 59	16.859
Fort William	14,376 50	8,853 68	45,067 96	....	61,044 78	....	20,688 46	150,031 38	21.355
Guelph Radial	6,222 47	8,460 29	23,833 92	9,504 01	24,148 73	....	9,732 47	81,901 89	34.560
Hamilton and Dundas	8,255 22	16,613 83	2,758 44	8,002 83	30,709 43	1,942 77	24,478 07	92,760 59	46.794
Hamilton, Grimsby and Beamsville	15,207 82	27,848 66	29,655 81	20,745 72	56,337 11	11,793 03	38,920 33	200,508 48	44.002
Hamilton Street	39,631 25	36,972 81	132,500 69	70,029 12	333,967 87	47,475 04	77,028 86	737,605 64	24.311
Hamilton and Barton Incline	See Statement								
Hamilton and Mountain Park	See Statement								
Huntsville and Lake of Bays (Steam) to December 31, 1920	192 75	200 00	764 78	....	3,456 35	....	1,318 19	5,932 07	21.859
International Transit	9,549 05	4,041 88	13,494 44	12,000 00	30,841 28	....	2,455 52	72,382 17	27.857
Kingston, Portsmouth and Cataraqui	6,415 08	14,020 94	14,283 07	5,086 04	18,808 50	282 69	630 77	59,527 09	29.811
Kitchener and Waterloo to Dec. 31, 1920	7,101 45	3,930 03	10,463 62	11,832 38	33,135 29	....	5,502 44	71,965 21	35.137
Lake Huron and Northern Ontario (Stm.)	4,153 36	103 20	282 23	....	5,886 10	....	....	10,424 89	††
London Street	35,998 10	40,089 50	59,136 39	34,663 50	239,830 32	24,692 22	20,467 30	454,877 33	24.430
Midland and Simcoe	Operated for switching purposes only.								
Mount McKay and Kakabeka Falls to December 31, 1920	2,532 32	902 25	5,656 42	....	5,889 22	....	386 95	15,367 16	††
Niagara Falls Park and River	28,055 23	29,154 86	6,599 31	13,058 27	48,176 61	264 05	4,851 77	130,056 10	40.272
Port Arthur Civic	16,501 82	12,842 49	30,414 66	19,709 28	56,879 13	413 34	5,123 15	141,883 87	20.190
St. Thomas Civic	4,475 30	5,297 76	....	5,317 60	29,103 98	....	31 03	44,225 67	20.185
Sarnia Street	8,049 41	18,947 87	13,722 81	9,851 11	23,265 37	270 00	14,768 79	88,875 36	43.207
Sudbury, Copper Cliff Suburban	7,040 55	4,151 60	4,393 87	5,000 40	21,252 27	....	1,501 62	43,340 31	31.140
Thurlow (Steam) to Dec. 31, 1920	....	29,709 29	11,589 55	....	8,281 40	....	11,441 00	61,021 24	††
Toronto Railway	548,231 11	311,088 90	1,025,753 72	941,817 62	3,428,115 42	236,662 09	35,164 48	6,526,833 34	30.570
Toronto Civic	30,614 83	15,431 53	46,999 36	86,674 70	314,134 91	2,588 89	18,956 37	515,400 59	23.825
Toronto and York Radial	161,405 99	89,293 87	167,790 52	95,322 01	156,362 25	....	123,834 44	794,009 08	45.624
Wellington-Waterloo	3,310 98	823 82	1,607 50	....	....	268 03	4,790 20	10,800 53	30.169

††Car miles not reported.

TABULATION OTHER THAN OPERATING COSTS FOR YEAR ENDING JUNE 30, 1920

Name of Railway	Interest on Funded Debt	Interest and Discount on Unfunded Debts	Taxes	Transfers to Special Accounts	All Charges other than Operating Costs	†Total Expenditure excluding Operating Costs	†Total Expenditure including Operating Costs	Total Revenue from all sources	Per car mile run		Net Deficit from year's Operation	Net Surplus from year's Operation
									Total Expend-iture	Total Revenue		
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	cents	cents	$ c.	$ c.
Cornwall Street			1,289 34		2,650 09	2,650 09	39,740 68	53,222 74	18.061	24.192		$13,482 06
Fort William	63,912 15			35,959 22	99,871 37	63,912 15	213,943 53	214,843 13	30.453	30.581	$35,059 62	
Guelph Radial			1,715 14		1,715 14	1,715 14	83,617 03	78,700 82	35.283	33.209	4,916 21	
Hamilton and Dundas	5,000 00		1,465 21		14,465 21	†14,465 21	†107,225 80	94,841 91	†54.091	†47.843	†12,383 89	
Hamilton, Grimsby and Beamsville	7,500 00	4,268 58	6,065 98	2,500 00	20,334 56	17,834 56	218,343 04	187,548 00	47.916	41.158	33,295 04	
Hamilton Street	16,629 80	1,238 10	96,605 20	6,893 18	205,716 28	†198,823 10	†936,428 74	955,709 66	†30.814	†31.581		†12,387 74
Hamilton and Barton Incline	See Statement											
Hamilton and Mountain Park	See Statement											
Huntsville and Lake of Bays (Steam) to December 31, 1920			64 00		1,732 00	†1,732 00	†7,664 07	8,552 19	†273.716	†305.435		†888 12
International Transit	5,625 00	4,129 52	814 09		25,568 61	†25,568 61	†97,950 78	107,451 09	†37.698	†41.354		†9,500 31
Kingston, Portsmouth and Cataraqui	4,000 00		1,433 24	3,087 49	8,520 73	5,433 24	64,960 33	71,138 43	32.532	35.625		3,090 61
Kitchener and Waterloo to Dec.31, '20	6,759 61		332 70	13,952 67	21,044 98	7,092 31	79,057 52	96,165 23	38.600	46.953		3,55 04
Lake Huron and Northern Ont. (Stm.)			426 80		426 80	426 80	10,851 69	10,874 18	††	††		2249
London Street	26,543 17	1,582 35	8,156 60	5,516 12	67,147 96	61,631 84	516,509 17	536,054 76	27.203	28.790		14,029 47
Midland and Simcoe	Operated only for switching purposes											
Mount McKay and Kakabeka Falls to December 31, 1920			549 59		7,320 98	†7,320 98	†22,688 14	27,202 71	††	††		†4,514 57
Niagara Falls Park and River	30,000 00		6,132 52		36,132 52	36,132 52	166,188 62	190,273 17	51.460	58.912		24,084 55
Port Arthur Civic	66,984 31			3,310 12	71,535 83	66,984 31	210,109 58	194,710 61	29.722	27.708	18,709 09	
St. Thomas Civic	Not reported						44,225 67	36,620 27	20.185	16.714	7,605 40	
Sarnia Street	4,772 50		1,072 28		11,244 78	†11,244 78	†99,047 86	96,040 39	†48.153	†46.691	†3,007 47	
Sudbury, Copper Cliff Suburban	4,500 00	1,329 20	108 42		5,937 62	5,937 62	49,277 93	52,574 06	35.406	37.775		3,296 13
Thurlow (Steam) to Dec. 31, 1920			26 71		26 71	26.71	61,047 95	43,384 90	††	††	17,663 05	
Toronto Railway	114,346 18	33,062 50	160,866 78		1,684,584 49	1,684,584 49	8,211,417 83	7,724,398 71	38.928	36.132	487,019 12	
Toronto Civic	107,570 40			72,237 03	179,807 43	107,570 40	622,970 99	499,484 19	32.436	26.048	195,723 83	
Toronto and York Radial Railway	20,500 00	135,704 65	11,899 42		208,887 51	208,887 51	1,002,896 59	964,784 47	57.627	55.437	38,112 12	
Waterloo-Wellington	2,919 00	545 97	659 40		4,124 37	4,124 37	14,924 90	11,820 59	41.689	33.018	3,104 31	

††Car miles not reported

†Includes dividend when paid.

TABULATION OF ASSETS AND LIABILITIES AS OF JUNE 30, 1920

Name of Railway	Authorized Capital Stock	Assets			Liabilities					
		Cost of Railway Equipment, Land and Buildings	Cash and other Assets	Deficit	Capital Stock outstanding	Funded Debt	Current Liabilities	Accrued Liabilities	Reserve and other Special Funds	Surplus
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Cornwall Street	200,000 00	225,706 86	22,154 57	....	200,000 00	....	2,533 81	....	24,200 00	21,127 62
Fort William	†	1,092,000 00	286,766 69	276,323 75	....	†1,317,000 00	96,120 37	....	272,613 57	....
Guelph Radial to Dec. 31, 1920	....	208,272 59	9,804 42	17,366 77	169,870 00	....	9,754 65	....	55,819 13	....
Hamilton and Dundas	100,000 00	221,584 39	74,490 97	....	100,000 00	100,000 00	32,281 75	152 30	32,281 75	63,641 31
Hamilton, Grimsby and Beamsville	235,000 00	493,984 57	3,591 53	31,385 94	235,000 00	150,000 00	141,110 10	2,851 94	....	....
Hamilton Street	1,205,000 00	2,289,477 99	8,531 47	....	1,205,00000	360,000 00	157,907 33	1,681 26	100,000 00	471,420 87
Hamilton and Barton Incline	See Statement.									
Hamilton and Mountain Park	See Statement									
Huntsville and Lake of Bays (Steam) to December 31, 1920	50,000 00	29,285 31	....	....	27,800 00	....	1,485 21	....	....	168 98
International Transit	150,000 00	506,285 76	30,651 69	....	150,000 00	100,000 00	86,305 93	857 40	96,300 59	103,473 53
Kingston, Portsmouth and Cataraqui	Not Reported				83,100 00	100,000 00	Not Reported			
Kitchener and Waterloo	†	216,507 36	16,365 68	....	†129,865 01	†129,865 01	3,077 51	3,342 74	93,432 74	3,155 04
Lake Huron and Northern Ontario (Steam)	12,000 00	609,000 00	....	....	‡595,000 00	‡595,000 00	21,646 21	....	....	....
London Street	750,000 00	1,505,810 52	61,882 70	....	637,480 00	537,000 00	61,207 86	9,663 79	5,516 12	90,088 69
Midland and Simcoe	Operated for switching purposes only									
Mount McKay and Kakabeka Falls to December 31, 1920	500,000 00	483,645 00	5,710 50	....	386,955 00	....	21 13	....	87,502 92	14,876 45
Niagara Falls Park and River	Not reported—This railway being operated as a division of the International Railway									
Port Arthur Civic	†	784,357 36	132,916 73	19,085 54	†	825,629 66	137,076 21	....	127,451 88	....
St. Thomas Civic	†	149,744 00	....	....	....	†146,862 95	....	....	....	....
Sarnia Street	100,000 00	251,457 49	2,526 41	....	90,000 00	90,000 00	8,000 00	....	....	65,983 95
Sudbury, Copper Cliff Suburban	250,000 00	309,493 29	....	....	173,100 00	75,000 00	39,224 05	2,250 00	....	19,662 74
Thurlow Steam	50,000 00	50,385 40	29,805 61	....	25,000 00	....	....	....	....	55,191 01
Toronto Railway	15,000,000 00	19,741,553 11	2,120,157 12	....	12,000,000 00	2,789,306 69	585,114 67	75,326 33	846,259 30	5,565,703 24
Toronto Civic	†	1,984,614 62	1,130,994 78	....	....	†2,552,737 00	36,577 93	....	526,294 47	....
Toronto and York Radial	2,000,000 00	5,543,973 64	253,353 02	....	2,000,000 00	12,700 00	3,546,944 35	3,202 87	8,036 89	226,442 55
Waterloo-Wellington	400,000 00	72,551 45	6,205 14	3,104 31	19,200 00	53,000 00	9,660 90	....	....	....

‡$464,000 Capital Stock—$505,000 Bonds in hands of pool for financing road.

†Municipal Debentures

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RETURN FROM THE RECORDS

OF THE

BY-ELECTIONS

TO THE

LEGISLATIVE ASSEMBLY IN 1921-22

HELD ON THE 19th DAY OF DECEMBER, 1921 AND 6th DAY OF FEBRUARY, 1922

SHEWING:

(1) The number of Votes Polled for each Candidate in each Electoral District in which there was a contest;
(2) The majority whereby each successful Candidate was returned;
(3) The total number of Votes Polled;
(4) The number of Votes remaining Unpolled;
(5) The number of names on the Polling Lists;
(6) The number of Ballot Papers sent out to each Polling Place;
(7) The Used Ballot Papers;
(8) The Unused Ballot Papers;
(9) The Rejected Ballot Papers;
(10) The Cancelled Ballot Papers;
(11) The Declined Ballot Papers; and
(12) The Ballot Papers taken from Polling Places.

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LIST OF RETURNING OFFICERS AT BY-ELECTIONS, 1921-1922

Constituency	Returning Officer.	Post Office.
1. Kingston	H. D. Wightman	Kingston.
2. Oxford, North	George Oliver	Bright

STATEMENT of Votes Polled, number of Polling Booths, and the number of names on Voters Lists at By-Elections held on the 19th day of December 1921 and 6th day of February, 1922.

Constituency	No. of Polling Booths	No. of Votes Polled.	No. of Names on Voters Lists
Kingston	53	9,656	14,798
Oxford, North	72	8,922	Not given.

SUMMARY of votes cast at the By-elections held on 19th December 1921 and 6th day of February, 1922, shewing the number of votes polled for each candidate and the majority accorded to the one elected in each constituency in which there was a contest.

Constituency	Candidates	Votes Polled.
Kingston	Robert Fawcett Elliott	4,485
	William Folger Nickle	5,102
	Majority for Nickle	617
Oxford, North	W. W. Day	3,384
	H. B. Neely	946
	D. M. Ross	4,692
	Majority for Ross	1,308

C. F. Bulmer,
Clerk of the Crown in Chancery.

Statement by Returning Officer respecting Votes Polled and Ballot Papers used at the Polling Places of the Electoral District of Kingston at the Election held on the Sixth day of February, 1922.

Electoral District.	Numbers of Polling Places.		Names of Candidates and Number of Votes Polled for each.		Voters at each Polling Place.			Ballot Papers sent out and how disposed of in each Polling Place.						
			Elliott	Nickle	Total Number of Votes Polled.	Number of Votes remaining Unpolled.	Number of Names on the Polling Lists.	Number of Ballot Papers sent out to each Polling Place.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Cancelled Ballot Papers	Declined Ballot Papers.	Ballot Papers taken from Polling Places
Kingston..	Sydenham ....No.	1A	90	97	190	122	312	325	190	135	3	....	....	....
	‘‘ .... ‘‘	1B	81	120	201	23	224	250	202	48	....	1	....	....
	‘‘ .... ‘‘	2A	45	114	162	123	285	300	162	138	3	....	....	....
	‘‘ .... ‘‘	2B	76	122	198	108	306	325	199	126	....	1	....	....
	‘‘ .... ‘‘	2C	22	23	45	3	48	50	45	5	....	....	....	....
	‘‘ .... ‘‘	2D	34	29	63	13	76	100	63	37	....	....	....	....
	‘‘ .... ‘‘	3A	81	109	190	88	278	300	190	110	....	....	....	....
	‘‘ .... ‘‘	3B	80	95	176	95	271	300	176	124	1	....	....	....
	Ontario............. ‘‘	4A	85	108	193	118	311	350	193	157	....	....	....	....
	‘‘ .... ‘‘	4B	58	110	171	147	318	350	171	179	3	....	....	....
	‘‘ .... ‘‘	5A	92	81	174	118	292	325	174	151	1	....	....	....
	‘‘ .... ‘‘	5B	66	90	157	120	277	300	157	143	1	....	....	....
	‘‘ .... ‘‘	6A	126	95	224	104	328	350	225	125	3	1	....	....
	‘‘ .... ‘‘	6B	98	130	228	120	348	375	228	147	....	....	....	....
	St. Lawrence.......... ‘‘	7A	111	67	179	92	271	300	181	120	1	1	....	....
	‘‘ .... ‘‘	7B	73	83	158	115	273	300	160	140	2	2	....	....
	‘‘ .... ‘‘	7C	74	74	148	117	265	300	148	152	....	....	....	....
	‘‘ .... ‘‘	8A	117	126	246	169	415	425	246	179	3	....	....	....
	‘‘ .... ‘‘	8B	107	105	213	130	343	375	213	162	1	....	....	....
	‘‘ .... ‘‘	9A	108	116	225	104	329	350	225	125	1	....	....	....
	‘‘ .... ‘‘	9B	79	116	195	130	325	350	197	153	2	....	....	....
	Cataraqui........... ‘‘	10A	133	128	262	73	335	350	262	88	1	....	....	....
	‘‘ .... ‘‘	10B	121	110	234	84	318	350	235	115	3	1	....	....
	‘‘ .... ‘‘	11A	103	85	189	97	285	300	189	111	1	....	....	....
	‘‘ .... ‘‘	11B	118	65	183	63	246	275	183	92	..	....	....	....
	‘‘ .... ‘‘	12A	65	53	119	66	185	200	119	81	1	....	....	....

“	“	12B	87	43	130	57	187	200	130	70			
Frontenac	“	13A	76	94	170	145	315	325	171	154		1	
“	“	13B	86	66	152	143	295	325	154	171		2	
“	“	14A	115	67	182	98	280	300	182	118			
“	“	14B	100	71	174	109	283	300	175	125	3	1	
“	“	15A	123	131	254	136	390	400	254	146			
“	“	15B	87	130	217	117	334	350	218	132		1	
“	“	16	119	111	232	166	398	425	232	193	2		
Rideau	“	17A	100	122	228	136	364	375	228	147	6		
“	“	17B	81	141	224	103	327	350	225	125	2	1	
“	“	18A	90	114	206	89	295	325	206	119	2		
“	“	18B	68	109	178	193	271	300	178	122	1		
“	“	19A	93	110	204	93	297	225	204	21	1		
“	“	19B	94	153	247	77	324	350	249	101		2	
“	“	19C	81	103	186	85	271	300	186	114	2		
“	“	20A	64	53	120	32	152	175	120	55	3		
“	“	20B	36	64	100	60	160	175	100	75			
Victoria	“	21A	71	79	152	116	268	300	152	148	2		
“	“	21B	122	158	285	109	394	425	285	140	5		
“	“	21C	68	83	151	119	270	300	151	149			
“	“	22	84	122	208	112	320	350	208	142	2		
“	“	23A	69	95	166	67	243	275	166	109	2		
“	“	23B	66	102	169	78	247	275	169	106	1		
“	“	23C	53	64	119	86	205	225	119	106	2		
Portsmouth	“	1	100	108	209	63	272	300	209	91	1		
“	“	2	87	99	187	73	260	275	187	88	1		
“	“	3	22	59	83	21	102	125	83	42		2	
Totals			4,485	5,102	9,656	5,225	14,798	15,925	9,674	6,252	69	17	
Majority for W. F. Nickle. 617													

Statement by Returning Officer respecting Votes Polled and Ballot Papers used at the Polling Places of the Electoral District of Oxford, North, at the Election held on the Nineteenth day of December, 1921.

Electoral District.	Number of Polling Places.		Names of Candidates and Number of Votes Polled for each.			Voters at each Polling Place			Ballot Papers sent out, and how disposed of in each Polling Place.						
			Day	Neely	Ross	Total Number of Votes Polled.	Number of Votes remaining Unpolled.	Number of Names on the Polling Lists.	Number of Ballot Papers sent out to each Polling Place.	Used Ballot Papers.	Unused Ballot Papers.	Rejected Ballot Papers.	Cancelled Ballot Papers	Declined Ballot Papers.	Ballot Papers taken from Polling Places.
N. Oxford	Blandford	No. 1	29	2	107	138			225						87
	“	“ 2	5	2	34	41			150						109
	“	“ 3	10	1	75	86			150						64
	“	“ 4	8	1	81	90			150						60
	“	“ 5	37	3	75	115			200				1		84
	Blenheim	“ 1	29	19	33	81			200						119
	“	“ 1A	34	10	32	76			175						99
	“	“ 2	15	8	98	121			250						129
	“	“ 3	4	1	159	164			275				1		160
	“	“ 4	19	3	60	82			200						118
	“	“ 5	48	7	53	108			200						92
	“	“ 5A	35	5	60	100			200				1		99
	“	“ 6	3	0	99	112			225						123
	“	“ 7	10	3	138	151			200			1			48
	“	“ 8	37	6	58	101			200			1			98
	“	“ 8A	29	9	64	92			200						98
	“	“ 9	28	5	96	129			225			2	2		92
	E. Zorra	“ 1	16	12	120	148			225			1			76
	“	“ 1A	22	10	111	143			250						105
	“	“ 2	33	8	82	123			200						77
	“	“ 2A	21	6	68	95			175						80
	“	“ 3	9	8	94	111			200						89
	“	“ 3A	25	7	94	126			250			2			122
	“	“ 4	7	4	107	118			200						82
	“	“ 5	31	4	91	126			275						149
	“	“ 6	9	0	86	95			300			2			203

Tavistock	"	1	97	13	17	127			225					98
"	"	2	76	7	12	95			200					105
"	"	2A	92	8	16	116			225			1		108
W. Zorra	"	1	26	3	140	169			275					106
"	"	2	20	1	173	194			275			2		78
"	"	3	5	0	234	239			300			1	2	58
"	"	4	20	2	160	182			300				1	117
"	"	5	18	4	84	106			175					69
"	"	5A	42	1	87	130			200					70
Embro	"	1	29	0	73	102			150			2		47
"	"	1A	36	1	92	129			225			1		94
E. Nissouri	"	1	76	11	44	131			175					44
"	"	1A	66	5	64	135			175			2		38
"	"	2	58	6	156	220			275					55
E. Nissouri	"	3	20	1	85	106			150			1		43
"	"	4	31	0	63	94			125					31
"	"	5	48	7	70	125			200					75
"	"	6	23	4	48	75			150					75
"	"	7	32	8	106	146			225					78
"	"	8	25	4	67	199			200			1		103
St. Andrews	"	1	75	41	31	147			325			1		177
"	"	1A	99	51	31	181			300			1		118
"	"	2	80	45	35	160			325					165
St. Davids	"	1	109	39	30	178			350					172
"	"	1A	105	28	32	165			325			1		159
"	"	2	58	25	29	112			275			1		162
"	"	2A	100	21	26	147			275			1		129
St. George	"	1	83	30	40	153			275					122
"	"	1	89	14	38	141			275					134
"	"	2	89	28	25	142			250			1		107
"	"	2A	90	37	36	163			275			1		111
"	"	3	78	29	42	149			275					126
"	"	4	77	30	26	133			250			2		125
"	"	4A	71	23	40	134			250					115
St. John	"	1	74	15	21	110			225					115
"	"	1A	64	21	14	99			225					126
"	"	2	68	22	20	110			225					114
"	"	2A	56	11	27	94			250					156
"	"	3	64	27	15	106			250					144
"	"	3A	97	25	21	143			250					107
St. Patricks	"	1	67	27	14	108			250					142
"	"	1A	55	33	14	102			225					148
"	"	2	57	17	25	99			200					101
"	"	2A	52	17	18	87			175			1		87
"	"	3	72	38	37	147			300			2		151

Statement by Returning Officer respecting Votes Polled and Ballot Papers used at the Polling Places of the Electoral District of Oxford, North, at the Election held on the Nineteenth day of December, 1921.—*Continued.*

Electoral District.	Numbers of Polling Places.	Names of Candidates and Number of Votes Polled for each.			Voters at each Polling Place			Ballot Papers sent out, and how disposed of in each Polling Place.						
		Day	Neely	Ross	Total Number of Votes Polled.	Number of Votes remaining Unpolled.	Number of Names on the Polling Lists.	Number of Ballot Papers sent out to each Polling Place.	Used Ballot Papers	Unused Ballot Papers	Rejected Ballot Papers.	Cancelled Ballot Papers.	Declined Ballot Papers.	Ballot Papers taken from Polling Places.
	St. Patricks .... " 3A	62	22	39	123	......	......	300	......	......	1	....	....	176
	Totals	3,384	946	4,692	......	......	......	......	......	......	......	......	....	....
	Majority for Ross. 1,308													

AUDITOR'S REPORT

1920-21

Prepared pursuant to the provisions of an Order-in-Council dated the 28th day af October, 1909

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed and Published by CLARKSON W. JAMES, Printer to the King's Most Excellent Majesty
1922

Printed by
THE RYERSON PRESS.

To His Honour Henry Cockshutt,

Lieuntenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present to Your Honour statements of the Auditor pursuant to the provisions of R.S.O., 1914, chap. 23, sec. 14, sub-sec. 2 of the Audit Act.

Respectfully submitted,

Peter Smith,

Treasurer of Ontario.

Treasury Department, Ontario,
Toronto, March 11th , 1922.

AUDIT OFFICE,
TORONTO, MARCH 11TH, 1922

SIR,—I have the honour to submit for the information of the Legislative Assembly pursuant to the provisions of an Order-in-Council dated 28th October, 1909, as provided by R.S.O., 1914, chap. 23, sub-section 2 of section 32, and pursuant to the provisions of sub-section 2 of section 14 and sections 28 and 29 of the Audit Act:—

(A) Legal opinions.
(B) Statement of Special Warrants issued.
(C) Statement of expenditures in excess of appropriations.

G. A. Brown,
Provincial Auditor.

Hon. Peter Smith,
Treasurer of Ontario.

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A

LEGAL OPINIONS

Re Increase in Salary of Mr. A. P. Clark

Provincial Auditor's Office,
Toronto, Ontario, June 2nd, 1921.

Dear Mr. Roadhouse:—

Pursuant to our conversation in reference to the increase in salary granted Mr. A. P. Clark by the Honourable the Minister, I might say that after carefully considering the matter it would seem to be quite clear that although the Minister has power under the provisions of 7 Geo. V, chap. 23, sec. 7, subsec. 2. to appoint such officers, clerks, etc., as he may deem necessary, he would not appear to have the power to make increases in salary.

Any increases therefore must be by direction of the Lieutenant-Governor in Council, with the certificate of the Civil Service Commissioner.

In the meantime, however, in order that there shall be no delay in the payment of the salaries, I have passed the requisition for the issue of the cheques.

I would ask you to be good enough to have the above conditions complied with in the case of Mr. Clark's increase in salary.

Yours truly,
G. A. Brown,
Provincial Auditor

W. B. Roadhouse, Esq.,
Deputy Minister of Agriculture.

Department of Agriculture, Office of the Deputy Minister,

Toronto, June 4, 1921.

Dear Mr. Brown:—

Acknowledging yours of the 2nd inst. in further reference to an increase in salary to A. P. Clark, I beg to say that the Department, as already intimated, has absolutely no objection to making this or any other increase by Order-in-Council if you so desire. I should be glad, however, if you would quote the statute under which the certificate of the Civil Service Commissioner is required. As this matter is being dealt with on the basis of an interpretation of the statutes, perhaps it would be well to have the opinion of the Deputy Attorney General on the subject.

I appreciate your courtesy in passing payment in the meantime, and will be very glad to have the matter finally settled at as early a date as possible.

Yours very truly,
W. Bert Roadhouse,
Deputy Minister.

G. A. Brown, Esq.,
Provincial Auditor.

Provincial Auditor's Office,
Toronto, June 7th, 1921.

Dear Mr. Bayly:—

I have been requested by the Deputy Minister of Agriculture to have an opinion from you as to the interpretation of a certain statute.

Under the provisions of 7 George V, chapter 23, section 7, subsection 2, the Minister of Agriculture may appoint such officers, clerks, servants and labourers as he may deem necessary, and may fix their salaries, etc., where any work of the Department is carried on elsewhere than at the seat of Government.

The question that has arisen is in connection with the following: The Minister appointed Mr. A. P. Clark at a salary of $1,500.00 per annum and subsequently increased this amount to $1,800.00 per annum.

My contention is that although the Minister has power to appoint, he has not been delegated the power to increase salaries, otherwise it would conflict with the provisions of the Public Service Act, 8 George V, chapter 5.

Would you therefore be good enough to let me have at your earliest convenience your opinion as to whether the Minister has power to increase any salary of an appointee, appointed under the provisions of 7 George V, chapter 23, without the authority of the Lieutenant-Governor in Council, upon the recommendation of the Civil Service Commissioner.

Vote 63, item 19, Main Estimates, 1920-21, provides specifically for cases of increases in salaries.

I enclose herewith a copy of my letter to the Deputy Minister of Agriculture, and his reply thereto.

Yours truly,
G. A. Brown,
Provincial Auditor.

Edward Bayly, Esq.,
Deputy Attorney General.

Department of Attorney General,
Toronto, June 9th, 1921.

My Dear Mr. Brown:—

I have your letter of June 7th, and enclosures which I now return. My opinion is that the Minister of Agriculture has power to increase the salary of Mr. A. P. Clark in the manner indicated without authority of the Lieut.-Governor in Council, and without the recommendation of the Civil Service Commissioner. There is of course no object in my going over the reason which has caused me to reach this conclusion, but I refer to 7 Geo. V, chap. 23, section 7, The Public Service Act, 8 George V, chap. 5, Vote 63, item 19, Main Estimates, 1920-21, Vote 59, item 4, Main Estimates, 1920-21.

Yours faithfully,
E. Bayly,
Deputy Attorney General.

G. A. Brown, Esq.,
Provincial Auditor.
Buildings.

Provincial Auditor's Office,
Toronto, Ontario, June 15th, 1921.

Dear Mr. Roadhouse:—

In reply to your letter of the 4th instant, requesting an opinion of the Deputy Attorney General in reference to the authority of the Minister to grant increases without the order of the Lieutenant-Governor in Council, of appointments made under 7 Geo. V, chap. 23, section 7, I beg to hand you herewith a copy of the opinion asked for.

Yours truly,
G. A. Brown,
Provincial Auditor,

W. Bert Roadhouse, Esq.,
Deputy Minister of Agriculture.

Re Temporary Appointments

Provincial Auditor's Office,
Toronto, June 10th, 1921.

Dear Mr. Bayly:—

Mr. G. C. Hurdman was appointed a Special Agent, Department of Lands and Forests, on 23rd June, 1920, for a period of three months, at a salary of $15.00 per diem.

On the 15th of September, he was re-appointed for a *further period* of three months at the same salary.

On the 8th of December, he was again re-appointed for a *further period* of three months at the same salary, and on the 2nd of March he was again re-appointed for a *further period* of three months at the same salary.

The above appointments were all by order of the Lieutenant-Governor in Council.

Since the first order is dated June 23rd, 1920, for a term of three months, his appointment would automatically cease on the 23rd of September, but having been extended for a further period of three months on three different occasions, the Order-in-Council in each case was dated a few days prior to the expiry of the existing order. May I ask you to be good enough to let me have your opinion as to whether the last order expires on June 2nd, or June 23rd.

You will notice that each appointment was for a *further period of three months,* and in each case was put through a few days ahead, in order to insure the passing of the new Order-in-Council prior to expiry of the existing one.

I am sorry to have to bother you, but I would be pleased if you would let me have your opinion on this matter.

Yours truly,
G. A. Brown,
Provincial Auditor.

E. Bayly, K.C.,
Deputy Attorney General.

Department of Attorney General,
Toronto, June 11th, 1921.

Re G. C. Hurdman.

My Dear Mr. Brown:—

I have your letter of June 10th, and may say that in my opinion the words further period mean a period beginning from the expiry of the last period.

On this interpretation the last order expires on June 23rd, not June 2nd. I may add that as there is no reference to date in the body of the order, it seems quite clear that the date of the order does not affect the matter at all.

Yours faithfully,
E. Bayly,
Deputy Attorney General.

G. A. Brown, Esq.,
Provincial Auditor.
Buildings.

Re Per Diem Allowance.

Provincial Auditors' Office,
Toronto, Dec. 13th, 1920.

Dear Mr. White:—

A ruling by the Treasury Board was made on the 22nd July, 1920, in reference to the per diem allowance of officials when travelling on Departmental business.

May I ask that you be good enough to let me have at your earliest convenience an interpretation of the following words used in the said order:—

"The Board is of opinion that the per diem allowance of $4.00 a day for travelling expenses fixed by the Order-in Council of the 10th September, 1918, is to be paid for each day or a portion of a day on which the officers are engaged on duty away from Toronto.

Yours very truly,
G. A. Brown,
Provincial Auditor.

Mr. J. T. White,
Solicitor to the Treasury.

Memo. for Mr. Brown,
Provincial Auditor.

In the absence of any qualifying term such as "working day," or "day of twenty-four hours," the word "day" means a period commencing and ending at twelve midnight. See Halsbury Laws of England, Volume 26, pages 123 and 124: Volume 27, page 439.

It is my opinion, therefore, that under this ruling a person leaving Toronto one evening and returning the following morning is entitled to be allowed for two days' travelling expenses.

J. T. White,
Solicitor to the Treasury.

Treasury Department,
Toronto, Dec. 14th, 1920.

B

SPECIAL WARRANTS

B

SPECIAL WARRANTS

STATEMENT OF SPECIAL WARRANTS ISSUED DURING THE FISCAL YEAR ENDED OCTOBER 31st, 1921.

Date of Warrant.	SERVICE.		Warrants	Expended. 1920-1921	Unexpended.
	Department of the Prime Minister.				
Dec. 1st, 1920	Commissions and Sundry Investigations	50,000 00			
May 5th, 1921	" " "	50,000 00			
July 5th, 1921	" " "	50,000 00	150,000 00	105,528 65	44,471 35
June 28th, 1921	W. S. B. Armstrong, Secretary of the Ontario Town Planning and Housing Conference held February 17th and 18th, 1921		300 00	300 00	
July 28th, 1921	Clarkson, Gordon and Dilworth, accountants, Toronto, for services in connection with a special report on the state of affairs of the Hydro Electric Power Commission of Ontario, and the Systems and Companies controlled by it, and other matters connected therewith		4,000 00	4,000 00	
Aug. 11th, 1921	Entertaining Representatives from the New England States for the inspection of the proposed Deep Waterways of Canada		3,500 00	3,131 70	368 30
	Department of the Attorney-General.				
Oct. 25th, 1920	Heyd and Heyd, settlement of action Johnston and Sarbfinoff vs. Lewis, License Inspector		400 00	400 00	
Dec. 2nd, 1920	Surplus Registry Fees, R.S.O., 1897, Cap. 138, Sec. 162, City of Toronto and County of York 1915—1919		80,381 67	80,381 67	
July 28th, 1921	Crown Attorney for the City of Toronto and County of York, salaries and expenses		16,000 00	3,725 00	12,275 00
	Department of Education.				
Nov. 8th, 1920	Establishment, management and maintenance of a Northern Academy at Monteith		30,000 00	17,602 22	12,397 78

Nov. 10th, 1920	Miss Eva Lindsay, payment of an award made by the Workmen's Compensation Board for injuries received while employed at the Ontario School for the Deaf, Belleville		150 00	68 75	81 25
Nov. 16th, 1920	Expenses incurred by the Royal Commission appointed for the purpose of enquiring into and reporting upon a basis for determining the financial obligations of the Province towards the University of Toronto, and the financial Aid which the Province may give to Queen's University, Kingston, and the Western University of London, and for the purposes of considering such other matters as may be assigned to the said Commission by the terms of appointment		1,000 00	992 70	7 30
May 13th, 1921	Mounting Maps of the Province of Ontario, which are to be used in the Provincial Schools and for Contingencies		8,000 00	275 00	7,725 00
May 17th, 1921	Archie Martin, High Court Secretary of the Ancient Order of Foresters, for the redemption of debenture No. 6, issued on behalf of School Section No. 4, Robillard and Truax		133 70	133 70	
	Department of Lands and Forests.				
Nov. 9th, 1920	Survey of Kapuskasing Colony, Township of O'Brien, of farming prospects for colonization purposes		150 00	150 00	
Nov. 18th, 1920	G. C. Hurdman, to pay salaries and expenses of self and staff, as Special Agent for the Department of Lands and Forests, in checking and measuring either logs or lumber or both, where the same may be found at the mills or elsewhere	3,000 00			
Jan. 21st, 1921	“ “ “	3,000 00	6,000 00	5,984 75	15 25
Nov. 25th, 1920	Canadian Aero Film Company of Toronto, and E. T. Ireson, O.L.S. Toronto, the Company having been engaged by the Province to transport by Hydro Plane, the said Engineer, employed by the Province to make observations and submit a report in accordance with instructions		6,550 00	6,499 75	50 25
May 26th, 1921	Legal Fees and Expenses in connection with the Department of Lands and Forests	25,000 00			
July 5th, 1921	“ “ “	25,000 00	50,000 00	45,147 67	4,852 33
Oct. 5th, 1921	Expenses in connection with the display at the Toronto Exhibition. 1921		400 00	396 60	3 40

SPECIAL WARRANTS.—Continued

Date of Warrants	SERVICE	Warrants	Expended 1920-1921	Unexpended
	Department of Mines.			
July 25th, 1921	Salaries and expenses in connection with the Temiskaming Testing Laboratories, formerly operated by the T. and N. O. Rly. Commission and which have been taken over by the Department of Mines	5,000 00	4,138 06	861 94
	Department of Game and Fisheries.			
Jan. 20th, 1921	Allowance to Messrs. Mercer, Bradford and Campbell, Barristers, Toronto, as settlement in the case of Commanda vs. Parks	300 00	300 00	
Jan. 24th, 1921	Colonel J. A. Little, Port Arthur, compensation for loss of equipment from a scow on Lake Nipigon	1,400 00	1,400 00	
	Department of Public Works.			
Aug. 11th, 1921	Rebuilding certain bridges in the Townships of Oro and Tecumseh, in the County of Simcoe, which were destroyed by a severe storm	8,000 00	6,605 11	1,394 89
	Department of Provincial Highways.			
July 13th, 1921	Investigations and Reports on the costs and economies of the manufacture of Portland Cement in the Province of Ontario	5,000 00	3,572 50	1,427 50
	Department of Labour.			
Dec. 9th, 1920	Allowance of $30.00 per month to E. J. Toker, a former employee of the Labour Bureau	360 00	210 00	150 00
Dec. 15th, 1920	Department of Soldier's Civil Re-establishment, one half cost of opening and maintaining Employment offices in the smaller towns of the Province of Ontario	9,860 84	9,860 84	

Oct. 13th, 1921	Hon. W. R. Rollo, to cover his travelling expenses as Representative of the Ontario Government, at the International Labour Conference at Geneva		1,500 00	1,500 00	

Provincial Treasurer's Department.

	Special Grant to the Municipal Corporation of the Town of Cochrane, to assist in payment of interest on debentures issued under By-law No. 168 of the said Town of Cochrane				
Oct. 29th, 1920	Balance unexpended, 1919-20		2,000 00	2,000 00	
Dec. 7th, 1920	Soldiers' Aid Commission, travelling, office and other expenses	50,000 00			
Jan. 24th, 1921	" " "	25,000 00	75,000 00	75,000 00	
Aug. 27th, 1921	Soldiers' Aid Commission, purchase of property, Kingston Road		20,000 00	20,000 00	
May 19th, 1921	Ontario Safety League, in aid of work in safety education		10,000 00	10,000 00	

Provincial Secretary's Department.

Dec. 7th, 1920	Ontario Hospital, Cobourg, alterations and improvements to buildings and plumbing, and to provide for Laundry Machinery	25,000 00			
July 13th, 1921	" " "	8,000 00	33,000 00	31,647 40	1,352 60

Department of Agriculture.

	Purchase and operation of stone crusher in order to demonstrate the value of lime in application to certain soils.				
Feb. 22nd, 1919	Balance unexpended 1919-20		4,549 35	146 65	4,402 70
	Purchase of stock, services, expenses and equipment necessary for carrying on experiments and investigations in connection with the possibilities of Ranching in Northern Ontario:				
Feb. 22nd, 1919	Balance unexpended 1919-20		1,165 18	159 45	1,005 73
Dec. 9th, 1920	Travelling expenses of the Hon. the Minister of Agriculture to Great Britain, in connection with the colonization work of the Department, and in order to investigate marketing conditions of Ontario Farm Product		800 00	787 05	12 95
Dec. 15th, 1920	To indemnify Banks for money advanced for seed grain which has not been repaid by the parties to whom the loans were made		230 00	225 89	4 11

SPECIAL WARRANTS.—Continued

Date of Warrants	SERVICE		Warrants	Expended 1920-1921	Unexpended
	Department of Agriculture.—Continued				
	Advertising, printing, services, expenses and equipment in connection with the campaign to encourage and bring about the use of pure bred sires more generally throughout the Province...				
Oct. 28th, 1919......	Balance unexpended, 1919-20..........	1,192 42			
Jan. 4th, 1921......	Warrant..........	1,500 00	2,692 42	1,905 92	786 50
May 31st, 1921......	Travelling expenses of the Hon. the Minister of Agriculture to Great Britain to confer with people in the British Isles interested in the removal of the embargo against the importation of Canadian cattle..........		1,100 00	1,100 00	
July 28th, 1921......	Purchase, equipment and maintenance of a warehouse for cold storage purposes at Brighton..........		30,000 00	23,297 37	6,702 63
Aug. 27th, 1921......	Preparation and presentation to the Dominion Railway Board of a case in favour of the reduction of freight rates on live stock and other agricultural products..........		7,000 00	5,491 64	1,508 36
	Miscellaneous.				
	Payment of bonuses to Civil Servants:				
Aug. 4th, 1920......	Balance unexpended 1919-20..........	138,481 75			
Nov. 10th, 1920......	Warrant..........	250,000 00	388,481 75	349,609 00	38,872 75
	Total Special Warrants..........		964,404 91	823,675 04	140,729 87

C

TREASURY BOARD MINUTES

C

TREASURY BOARD MINUTES

Statement of Treasury Board Minutes issued for Expenditures in Excess of Appropriations during the Fiscal Year ended October 31st, 1921.

Department of the Prime Minister.

Date	Service	Warrant	Expended
	Civil Government:		
Jan. 13th, 1921..	Civil Service Commissioner, salaries........	600 00	600 00

Legislation

Date	Service	Warrant	Expended
May 11th, 1921..	Contingencies, including stationery and equipment for reporters..............................	5,000 00	4,933 85
May 11th, 1921..	Sessional Writers, messengers, etc..............	500 00	256 90
Jan. 24th, 1921..	House Post Office, contingencies................	2,000 00	125 06
Aug. 16th, 1921..	Library, books, binding and contingencies.......	2,500 00	1,467 32

Department of the Attorney-General

Date	Service	Warrant	Expended
	Civil Government:		
May 17th, 1921 Sept. 13th, 1921	Attorney General's Office....Contingencies	2,500 00	2,370 01
Aug. 25th, 1921..	Audit of Justice Accounts... do	400 00	150 28
July 5th, 1921 Sept. 8th, 1921	Insurance Inspection........ do	8,500 00	4,213 07
Oct. 31st, 1921..	Special services for inspection, etc........	110 34	110 34
Sept. 28th, 1921..	Printing Reports, 1919..................	1,119 11	1,119 11
	Administration of Justice:		
Sept. 13th, 1921..	Inspection of Legal Offices, salaries.........	1,575 00	740 13
May 31st, 1921..	Drainage Trials Act, travelling expenses.....	400 00	184 16
June 28th, 1921..	General Administration of Justice in Counties	200,000 00	123,627 19
Oct. 31st, 1921..	Ontario Provincial Police, contingencies.....	300 00	283 96
Oct. 31st, 1921..	Shorthand Reporters, services, etc..........	3,000 00	2,800 00
June 20th, 1921..	District of Algoma, administration of justice.	7,000 00	6,999 63
Aug. 25th, 1921..	do Manitoulin, fuel, light and water.....	1,000 00	490 71
Sept. 8th, 1921..	do do travelling expenses of Police Magistrate.........	450 00	381 15
Oct. 11th, 1921..	do Nipissing, fuel, light and water.......	500 00	294 56
Aug. 4th, 1921..	do Temiskaming, administration of justice..................	5,000 00	3,026 87
Sept. 8th, 1921..	do do Police Magistrate C. N. R. construction, travelling expenses.......	250 00	70 06
	Miscellaneous:		
Aug. 25th, 1921..	Commissions re Sundry Investigations......	5,000 00	1,961 42
May 31st, 1921..	Enforcing Ontario Temperance Act.........	200,000 00	132,084 28

Department of Education.

Date	Service	Warrant	Expended
	Education:		
July 19th, 1921..	Rural Public and Separate Schools, counties.	555,000 00	535,507 62
Oct. 31st, 1921..	Inspection of Public and District Schools....	10,000 00	8,912 94
July 19th, 1921..	P. and S. S. Inspection, travelling and moving expenses of Inspectors..................	15,000 00	13,158 09
May 27th, 1921 Oct. 11th, 1921	Toronto N, S., fuel, light and power........	1,650 00	1,643 42
Oct. 26th, 1921..	do water........................	110 00	105 65
May 5th, 1921 Sept. 8th, 1921	Ottawa, N. S., fuel, light and power.........	6,800 00	5,647 94
June 28th, 1921..	London, N. S., do	1,000 00	926 69
Aug. 16th, 1921..	Hamilton, N. S., do	1,700 00	1,526 62
Sept. 8th, 1921..	Peterborough, N. S., reference books, contingencies..............................	400 00	301 06

TREASURY BOARD MINUTES.—Continued

Date	Service	Warrant	Expended
	Department of Education.—Continued		
Nov. 30th, 1920 Sept. 28th, 1921	Stratford, N. S., fuel, light and power	2,700 00	2,517 56
Sept. 8th, 1921	North Bay, N. S., students' board and travelling expenses	6,000 00	5,970 98
Sept. 8th, 1921	do fuel, light and power	500 00	226 88
Nov. 4th, 1920 Nov. 9th, 1921	Ottawa English-French Training School, salaries	550 00	550 00
Aug. 16th, 1921	do reference books, contingencies, etc.	500 00	449 32
July 5th, 1921	do students' board and travelling expenses	2,100 00	1,773 55
Nov. 4th, 1920 Nov. 9th, 1921	Sturgeon Falls, English-French Training School, salaries	1,650 00	810 00
Nov. 4th, 1920 Nov. 9th, 1921	Vankleek Hill, English-French Training School, salaries	650 00	650 00
July 19th. 1921	do student's board and travelling expenses	400 00	287 25
Nov. 4th, 1920 Nov. 9th, 1921	Sandwich English-French Training School, salaries	1,850 00	1,850 00
Sept. 8th, 1921	do students' board and travelling expenses	2,000 00	1,403 20
Nov. 4th, 1920 Nov. 9th, 1921	High School Inspection, salaries	1,800 00	1,800 00
May 11th, 1921	Departmental Library and Museum, binding and repairing books	400 00	372 60
Nov. 4th, 1920 Nov. 9th, 1921	Technical Education, salaries	1.300 00	933 30
Sept. 8th, 1921	do travelling expenses	500 00	218 63
Nov. 4th, 1920 May 17th, 1921 Nov. 9th, 1921	School for the Deaf, Belleville, salaries	15,685 95	15,685 95
Nov. 4th, 1920 Nov. 9th, 1921	School for the Blind, Brantford, salaries	10,394 00	4,690 86
Dec. 6th, 1920	Miscellaneous, Litigation and other legal costs	13,000 00	12,275 32
Jan. 24th, 1921	Travelling expenses	1,500 00	874 13
	Department of Lands and Forests.		
	Civil Government		
June 20th, 1921 Oct. 19th, 1921	Lands and Forests contingencies	20,000 00	12,948 14
July 5th, 1921 Sept. 8th, 1921	Forestry Branch do	3,000 00	1,626 62
	Crown Lands		
May 17th, 1921 Sept. 8th, 1921	Forest Ranging	75,000 00	64,428 11
Oct. 19th, 1921	Compensation to Workmen	400 00	42 76
Sept. 28th, 1921	Algonquin Provincial Park	10,000 00	4,705 81
Sept. 28th, 1921	Rondeau do	3,200 00	2,295 90
	Colonization Roads:		
Dec. 13th, 1920	Inspection of Roads and Bridges, unpaid accounts, 1919-20	2,000 00	1,036 69
	Department of Mines		
	Civil Government:		
Sept. 8th, 1921	Contingencies	4,000 00	666 05
	Miscellaneous:		
Oct. 11th, 1921	Inspection of Mining Recorders' Offices	300 00	300 00
Oct. 11th, 1921	Natural Gas Commissioner	800 00	474 83
Oct. 11th, 1921	Insurance	685 00	395 00

TREASURY BOARD MINUTES.—Continued

Date	Service	Warrants	Expended
	Department of Game and Fisheries.		
	Miscellaneous:		
July 19th, 1921..	Maintenance of Hatcheries	8,000 00	7,696 59
Sept. 8th, 1921..	Erecting ponds and buildings, for propagation of fish, etc	10,000 00	8,518 35
	Refunds:		
May 27th, 1921..	Miscellaneous	15,000 00	11,014 82
	Department of Public Works.		
	Maintenance and Repairs:		
Sept. 15th, 1921 Oct. 11th, 1921 Nov. 9th, 1921	Government House, pay lists, gardeners, firemen, etc	3,485 41	3,485 41
July 19th, 1921 Oct. 19th, 1921 Nov. 9th, 1921	do repairs, contingencies, etc	2,487 33	2,481 33
May 11th, 1921 Oct. 11th, 1921	do water, fuel, light and power	1,700 00	1,520 34
May 11th, 1921 Oct. 11th, 1921	Parliament Buildings, water and fuel	12,500 00	10,621 75
Oct. 11th, 1921 Oct. 28th, 1921	do Electric power, light, current and gas	2,100 00	1,892 51
Sept. 13th, 1921..	do furniture and furnishings for buildings	3,000 00	2,167 12
Jan. 24th, 1921..	do painting inside and outside work	2,500 00	2,465 44
July 7th, 1921..	do rental of Government office, Spadina Crescent	778 75	778 75
June 28th, 1921 Oct. 28th, 1921	Osgoode Hall, fuel, light, water and power	1,700 00	1,671 33
	Public Buildings:		
Oct. 26th, 1921..	Osgoode Hall, general repairs and alterations	700 00	652 29
Jan. 6th, 1921 Oct. 11th, 1921	do painting interior and exterior	1,700 00	1,407 89
Jan. 24th, 1921 Oct. 19th, 1921	Industrial Farm Burwash, construction of works	26,100 00	25,830 94
July 13th, 1921..	do purchase of land	400 00	400 00
May 31st, 1921..	Ottawa N. S., city of Ottawa, taxes 1919-20-21	3 56	3 56
Oct. 19th, 1921..	Stratford N. S., painting interior and exterior	328 00	328 00
Oct. 28th, 1921..	District of Algoma, furniture and furnishings	60 77	60 77
Oct. 28th, 1921..	do Muskoka, general repairs to court-house, gaol and registry office, etc	92 09	68 69
Oct. 28th, 1921..	do Nipissing, repairs and alterations to court house, gaol, etc	71 90	57 32
Sept. 8th, 1921..	do Rainy River, furniture and furnishngs	150 00	102 73
June 28th, 1921..	do Thunder Bay, repairs and alterations to court house, gaol, etc	250 00	229 62
May 13th, 1921 Sept. 8th, 1921	Miscellaneous, compensation to workmen injured, while engaged on Government works	4,000 00	3,680 70
	Bridges:		
Sept. 8th, 1921..	Maintenance, locks, dams, bridges, etc	10,000 00	9,459 13
June 20th, 1921..	Surveys and Inspections	3,000 00	2,980 61
Jan. 20th, 1921..	Cache Creek Bridge, 2nd line, Springer	175 00	170 99
Oct. 11th, 1921..	Commanda Creek Bridge, Nipissing	200 00	198 44
June 28th, 1921..	Hurdville Bridge, McKellar	575 00	532 27
Oct. 19th, 1921..	North Creek Bridge, Widdifield	400 00	363 65
Jan. 20th, 1921 Feb. 28th, 1921	North River Bridge, 3rd line, Matchedash	977 95	713 21

TREASURY BOARD MINUTES.—Continued

Date	Service	Warrants	Expended
	Department of Public Works.—Continued		
Oct. 11th, 1921..	Skelton River Bridge, Parry Sound Rd., Watt	800 00	435 35
Jan. 20th, 1921..	13th Line Bridge, South River	1,200 00	1,189 49
Jan. 20th, 1921 Oct. 19th, 1921	Walter's Falls Bridge, Sydenham River	1,950 00	1,848 99
Sept. 8th, 1921..	White Oak Bridge, Humphrey	1,300 00	1,261 11
	Drainage:		
Oct. 11th, 1921	Keppel Drain, Con. 18	240 00	233 63
Sept. 8th, 1921	Compensation to injured workmen	500 00	466 54
	Department of Public Highways		
	Civil Government:		
Sept. 8th, 1921 Oct. 31st, 1921	Contingencies	19,500 00	17,524 49
	Miscellaneous:		
July 19th, 1921..	Auto markers and supplies	5,000 00	4,124 87
Oct. 19th, 1921..	Good roads, model exhibit	75 00	27 18
	Department of Labour and Health		
	Civil Government:		
Sept. 8th, 1921 Oct. 31st. 1921	Board of Health, maintenance of Laboratory.	8,000 00	6,852 40
	Labour:		
Oct. 11th, 1921..	Employment Bureaus	15,000 00	9,275 10
Jan. 14th, 1921..	Mother's Allowance Act, administration	34,500 00	26,554 31
Sept. 8th, 1921.. Oct. 11th, 1921..	do allowances	25,000 00	24,605 00
	Health:		
Oct. 21st, 1921..	Public Health Laboratory, S. S. Marie	2,000 00	81 06
Oct. 25th, 1921..	do North Bay	2,000 00	71 29
Oct. 11th, 1921.. Oct. 28th, 1921..	Division of Sanitary Engineering	5,000 00	3,377 30
	Department of the Provincial Treasurer		
	Civil Government:		
Oct. 31st, 1921..	Contingencies	6,500 00	5,794 87
June 20th, 1921 Oct. 11th, 1921	Amusement Tax Branch, contingencies	11,500 00	9,990 80
Oct. 19th, 1921..	King's Printer's Office, contingencies, etc.	500 00	298 49
	Miscellaneous:		
June 28th, 1921..	Stock transfer stamps	500 00	54 25
June 9th, 1921..	Wolf Bounty	12,000 00	11,955 00
Nov. 4th, 1920 Sept. 19th, 1921	Board of Censors, salaries	3,850 00	1,215 02
Sept. 8th, 1921..	Fire Marshall Act	10,000 00	3,922 87
	Refunds:		
Dec. 9th, 1920 May 17th, 1921 Sept. 20th, 1921	Amusement Tax Act	14,000 00	11,036 91
	Department of the Provincial Secretary		
	Civil Government:		
Aug. 16th, 1921..	Contingencies	3,900 00	2,634 62
Oct. 19th, 1921..	Neglected Children's Branch, salaries	1,950 00	284 64
Oct. 19th, 1921..	Bureau of Municipal affairs, salaries	700 00	550 00
	Public Institutions:		
	Brockville Hospital:		
Aug. 4th, 1921 Oct. 31st, 1921	Salaries	56,674 39	45,282 19
Aug. 27th, 1921..	Maintenance, plumbing, etc.	6,000 00	4,752 41
	Cobourg Hospital:		
Aug. 4th, 1921..	Salaries	11,000 00	2,874 87

TREASURY BOARD MINUTES.—Continued

Date	Service	Amount	Expended
	Department of Provincial Secretary.—Continued		
	Hamilton Hospital:		
Aug. 4th, 1921 Oct. 31st, 1921	Salaries	78,605 00	66,514 28
	Kingston Hospital:		
Aug. 4th, 1921 Oct. 31st, 1921	Salaries	39,203 16	32,353 52
	London Hospital:		
Aug. 4th, 1921	Salaries	90,350 00	80,550 93
	Mimico Hospital:		
Aug. 4th, 1921	Salaries	30,000 00	26,083 31
	Orillia Hospital:		
Aug. 4th, 1921 Oct. 31st, 1921	Salaries	36,792 24	34,177 92
July 13th, 1921	Expenses	40,000 00	1,145 82
	Penetanguishene Hospital:		
Aug. 4th, 1921	Salaries	14,300 00	9,958 27
	Toronto Hospital:		
Aug. 4th, 1921 Oct. 31st, 1921	Salaries	18,018 84	17,997 38
	Whitby Hospital:		
Aug. 4th, 1921 Oct. 31st, 1921	Salaries	51,197 47	37,484 21
	Woodstock Hospital:		
Aug. 4th, 1921 Oct. 31st, 1921	Salaries	13,743 60	11,361 40
	Guelph Reformatory:		
Aug. 4th, 1921 Oct. 31st, 1921	Salaries	11,902 46	8,892 69
Sept. 27th, 1921	Expenses	20,000 00	18,770 69
Aug. 4th, 1921 Oct. 31st, 1921	Industries salaries	13,149 25	2,697 07
June 9th, 1921	Industries, expenses	50,000 00	36,573 16
	Mercer Reformatory for Females:		
Aug. 4th, 1921	Salaries	6,700 00	2,953 22
Jan. 13th, 1921 Aug. 27th, 1921 Nov. 10th, 1921	Industries, salaries and expenses	60,159 95	60,159 95
	Burwash Industrial Farm:		
Aug. 4th, 1921	Salaries	39,000 00	26,109 99
Jan. 13th, 1921 July 7th, 1921	Expenses	78,000 00	57,376 07
	Miscellaneous:		
Oct. 19th, 1921	Salaries of Bailiffs, removing patients	450 00	175 98
Oct. 19th, 1921	do do prisoners	200 00	200 00
Oct. 21st, 1921	Travelling expenses, etc. of Bailiffs and prisoners	800 00	339 49
	Department of Agriculture		
Oct. 31st, 1921	Agricultural Representatives, expenses	15,000 00	1,181 32
Oct. 19th, 1921	Miscellaneous, removal expenses of officers of the Department	500 00	497 60
July 25th, 1921	Incidentals	12,000 00	5,475 67
May 31st, 1921	Ontario Agricultural College expenses	8,000 00	301 78
May 31st, 1921	Poultry Department, expenses	2,000 00	1,767 71
May 31st, 1921	Horticultural Department, expenses	3,000 00	3,294 98
	Total Treasury Board Minutes	2,328,876 52	1,842,803 54

TREASURY BOARD MINUTES.—Concluded

Date	Service	Amount	Expended
	Hydro-Electric Power Commission:		
Oct. 28th, 1921	Queenston Development	3,980,674 52	3,980,674 52
	Thunder Bay System	266,795 27	266,795 27
	Rideau System	12,416 07	12,416 07
	Nipissing system	27,000 00	27,000 00
	Miscellaneous	209,350 16	209,350 16
	Expenditure on account of Province	359,068 86	....
	Total	4,855,304 88	4,496,236 02

Summary:

Total expended by Departments	**1,842,803 54**
" " Hydro Commission	**4,496,236 02**
Grand Total	**6,339,039 56**

REPORT FOR 1920

OF

The Workmen's Compensation Board

ONTARIO

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

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THE WORKMEN'S COMPENSATION BOARD

SAMUEL PRICE, Chairman
GEO. A. KINGSTON, Commissioner
N. B. WORMITH, Secretary

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REPORT FOR 1920

OF

The Workmen's Compensation Board

ONTARIO

To His Honour the Lieutenant-Governor:

The Workmen's Compensation Board begs to submit its Report for the year 1920, being the sixth year of the operation of the Act.

GENERAL REVIEW

The total benefits awarded during the year 1920 amounted to $7,780,145.25, as against a total of $4,192,859.93 during 1919, and $3,883,994.84 during 1918.

The increase is largely by reason of the increased benefits provided for under the amendments made to the Act in 1920, and especially the increase in death pensions for accidents happening in previous years, which amounted to $2,289,249.55.

The total number of accidents reported during the year was 54,851, as against 44,260 during 1919, and 47,848 during 1918. The fatal accidents numbered 452, as against 429 in 1919, and 440 in 1918.

The benefits during the year averaged $26,000 per day, the cheques issued 494 per day, and the reports of accidents received 183 per day.

Retroactive Increases Provided For

It is gratifying to be able to state that all the retroactive increases in benefits have been provided for. The year 1921 starts without any burden for prior accidents.

Increased Benefits and Assessments

The amendments of 1920, materially increasing the scale of benefits and placing Ontario well in the forefront in the matter of liberality of compensation allowances, have upon the whole worked satisfactorily, and the burden is not proving excessive. The rates of assessment in Ontario are still low as compared with neighbouring states, though the latter as a rule pay smaller benefits. The absence under our state-administered collective liability system of the large overhead charges and profits necessarily incidental to insurance systems of other places, and the reduction of expenses to a minimum, explain the difference. Of the assessments collected in Ontario during 1920 only 1.55 per cent. went toward expenses. Only about 50 per cent. of liability insurance premiums is estimated to go toward actual payment of benefits.

The average rate of assessment, for all industries, paid by employers in Ontario each year since the commencement of the Act was 1915, $1.27; 1916, $1.09; 1917, $.99; 1918, $1.09; 1919, $1.22; 1920, $1.25.

The Dual System

Not all the industries covered by the Ontario Act, however, are under the collective liability system. A number included in what is known as Schedule 2 are upon the individual liability basis, and in these the workmen and their dependants are depending upon the solvency, and will in respect of future pension payments be depending upon the continued existence and the continued solvency, of the individual employer.

It is felt that this condition of affairs should be remedied, otherwise many pensioners will in later years have their pensions cut off when collection cannot be made from the employer. The remedy recommended by the Board is to require Schedule 2 employers to pay in at once the full capitalized value of each pension award, past as well as future, and with these payments form a pension fund out of which all pensions will be paid. This is the manner in which pension awards are taken care of in Schedule 1 industries, and there is far greater need of applying the system to Schedule 2, as in Schedule 2 the pensioner is now depending upon the responsibility of the individual employer, and there will be many cases where, though collection could be made at once, it will be impossible to collect in the future. It is also felt that Schedule 2 employers should, like Schedule 1 employers, make good any current default of their insolvent members. With the above-mentioned provision for immediate collection of the full capitalized values and the establishment of a pension fund the amount should be slight. To give assurance upon this point an express limit of one per cent. of the accident cost is suggested. The alternative, if workmen and their dependants are to receive what they are entitled to under the Act, would be payment by the Government, and there seems no reason why the Government should pay in Schedule 2 cases when Schedule 1 employers bear the burden themselves.

The above suggestions would remove the most serious objection to the existence of Schedule 2, but there is the further question of the abolition of Schedule 2 entirely, and placing all industries upon the same footing as those in Schedule 1. Ontario is the only province that has this system. When establishing Schedule 2 the framer of the Act stated that it would be well to test the working of the two systems side by side. Experience leaves no doubt of the many advantages and general desirability of the Schedule 1 system. A dual system also is objectionable because of the complication and cumbersomeness it necessarily entails. It is very desirable that a compensation law should be as simple as possible.

Contents of Report

Following the divisions into Schedule 1 and Schedule 2, which are in effect two separate administrations, Chapter I deals with Schedule 1 industries for 1920 and Chapter II with Schedule 2, showing the receipts and expenditures of each for the year and the standing at the close of the year.

Chapter III deals specially with the accidents handled and compensation awarded in both schedules during the year, showing comparison with previous years.

The total compensation awarded during the year 1920 amounted to $7,076,139.59, of which $5,113,049.77 was in Schedule 1, and $1,963,389.82 in Schedule 2.

The amount paid for medical aid in Schedule 1 industries during 1920 was $703,705.66, being about 13.8 per cent. of the compensation awarded. There is no record of the amount of medical aid in Schedule 2 industries as in these industries medical aid is furnished directly by the employer.

Particulars as to administration expenses, and the names, position, and salaries of the staff of the Board are also given in Chapter III.

Chapter IV shows the condition of the various funds held by the Board, and gives a detailed list of investments. The permanent investments in Schedule 1 amounted at the end of the year to $8,052,868.29, and in Schedule 2, to $2,041,963.08. The average rate of interest received on these during the year was 5.68 per cent.

Chapter V gives the completed financial statement and a large amount of very interesting statistical information in regard to Schedule 1 industries for 1919, this being the latest year for which the figures as to length of disability and cost of accidents are complete.

The total time loss for the year's accidents, exclusive of loss of man power by death and permanent disability, amounted to 511,674 days, as compared with 573,653 days for 1918.

The average time loss for temporary disability cases was 19.66 days, as against 19.75 days in 1918.

The average cost of all accidents in which compensation was paid was $163.99, of which $144.14 was for compensation and $19.85 for medical aid. The average for 1918 was $135.80, the increase being due largely to increased benefits.

The average weekly wage increased from $21.93 in 1918, to $22.26 in 1919, and the average age of injured workmen decreased from 34.93 years in 1918 to 34.47 in 1919.

Eighty-two per cent. of the workmen injured in 1919 were British subjects, as compared with 76 per cent. in 1918, those of foreign allegiance having decreased from 24 to 18 per cent.

Fifty-seven per cent. of the injured workmen were married, as compared with 59 per cent. for the previous year, and a little over three per cent. were females, as compared with five per cent. for the previous year.

Tabulation of the nature of injuries and the causes of accidents will also be found in this chapter.

Of the 32,629 Schedule 1 accidents, 11,769 involved medical aid only, 18,476 involved compensation for temporary disability, 2,157 resulted in some degree of permanent disability, and 227 were death cases in which dependants were compensated.

Chapter VI contains an article by the Board's Statistician completing the study commenced a year ago regarding the condition of injured workmen who are receiving pensions under the Act.

In the Appendix are some comments upon the working of the Act.

CHAPTER I

SCHEDULE 1 INDUSTRIES FOR 1920

Table 1 is a provisional statement for Schedule 1 by classes for 1920. The income and expenditure, both actual and estimated, under different headings, and the provisional balance for 1920, are shown for each class. Estimates are required in the provisional statement to complete the year's income and expenditure because at the end of the year assessments for the year have not been finally adjusted nor have all accidents occurring in the year been fully paid for. In accordance with the Board's practice in prior years full and final figures for 1920 will appear in the Report for 1921 just as Table 11 of this Report complements Table 1 of the Report for 1919.

A statement for Schedule 2 industries appears in Chapter II.

The total income, actual and estimated, for all classes of Schedule 1 for the year 1920 was $5,608,455.35. The balance forward from prior years was $441,311.78. The total was, therefore, $6,049,767.13. The total expenditure, actual and estimated, including the amounts set aside for pensions, disaster reserve, and compensation deferred, and the amounts paid for expenses of administration and safety associations, was $5,230,948.77. The net provisional balance, therefore, is $818,818.36.

The provisional balance is in the nature of a working fund to provide for payments of compensation, etc., during the period between the end of the year and the time when the first payment of the current year's assessments falls due, a matter of three months or more.

The provisional balance for 1920 is $818,818.36, as compared with a provisional balance of $770,213.72 and an actual balance of $441,311.78 for 1919.

Assessments

Assessments were collected from approximately 17,000 employers. The assessments, actual and estimated, represent a total pay roll of $436,127,337.98.

The assessments in Schedule 1 industries for 1920 were:

Collected on Estimated Pay Rolls	$4,472,913 34
Estimated Adjustment	1,002,360 10
Total	$5,475,273 44

Other Income

The other income for the year included interest on current funds, payments under Sections 9, 93a, and 99 (3), and $15,000 was transferred from the Disaster Reserve, making a total of $133,181.91.

Balance Forward

The balance forward from 1919 is made up as follows:

1915 Surplus	$657,015 88
1916 Surplus	394,699 83
1917 Deficit	—19,348 26
1918 Surplus	59,148 03
1919 Deficit	—650,203 70
	$1,110,863 74
	—669,551 96
Balance forward from 1919	$441,311 78

TABLE 1

PROVISIONAL STATEMENT OF INCOME AND EXPENDITURE, SCHEDULE 1 BY CLASSES, FOR YEAR 1920

	INCOME (Actual and Estimated)					EXPENDITURE (Actual and Estimated)											BALANCE (Provisional)	
Class.	Assessments Collected on Estimated Pay Rolls.	Interest on Current Funds, Secs. 9, 93a and 99 (3) Payments	Estimated Adjustment 1920 Pay Rolls.*	Carried Forward from 1919.	TOTAL	Compensation Paid, other than Pensions.	Transferred for Pensions Awarded.	Paid to Safety Associations.	Administration Expenses.	Compensation Deferred.	Paid for Medical Aid.	Set aside for Disaster Reserve.	Compensation Estimated for Continuing Disabilities.	Compensation Estimated for Outstanding Accidents.	Estimated for Medical Aid.	TOTAL		Class.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
1	498,751 57	3,653 05	188,102 66	2,850 77	693,358 05	173,330 69	194,924 00	4,977 19	11,828 25	3,260 00	69,124 06	4,990 81	65,713 50	87,445 84	24,741 40	640,335 74	53,022 31	1
2	228,309 88	123 95	100,262 79	—66,707 78	261,988 84	80,997 90	80,541 00	4,837 83	3,555 28	1,830 00	28,439 30	2,284 34	24,260 81	37,527 94	8,398 65	272,673 05	—10,684 21	2
3	111,160 01	4,051 74	34,713 15	41,969 20	191,894 10	44,404 66	42,388 00	1,332 61	1,976 13	1,775 00	12,883 60	1,111 60	18,109 05	21,335 34	6,983 84	152,299 83	39,594 27	3
4	197,022 42	1,825 23	91,750 59	11,701 51	302,299 75	85,554 96	67,168 00	2,673 47	3,964 51	6,760 00	26,204 55	1,975 83	39,280 48	39,752 69	12,968 43	286,302 92	15,996 83	4
5	335,628 68	11,784 06	35,474 22	36,697 38	419,584 34	100,628 09	91,503 00	....	4,130 19	825 00	35,360 01	3,356 92	70,495 73	52,690 36	15,865 41	374,854 71	44,729 63	5
6	129,661 54	526 80	73,435 25	5,718 39	209,341 98	45,437 19	85,227 00	1,814 46	2,690 68	400 00	13,168 59	1,301 88	13,781 40	28,969 01	15,227 09	208,017 30	1,324 68	6
7	278,235 73	8,069 84	—628 45	3,504 75	289,181 87	102,908 86	38,308 00	3,447 54	5,112 38	1,025 00	33,949 85	2,782 36	27,503 35	33,947 04	7,583 66	256,568 04	32,613 83	7
8	129,673 50	1,497 87	64,896 89	10,516 70	206,584 96	89,831 52	9,463 00	1,582 04	2,346 01	165 00	29,842 20	1,296 74	14,422 76	22,776 46	5,579 84	177,305 57	29,279 39	8
9	294,327 92	10 00	92,029 11	—12,282 45	374,084 58	113,109 82	111,474 94	3,949 29	5,856 42	2,350 00	42,970 05	2,943 38	41,610 37	53,708 91	8,879 50	386,852 68	—12,768 10	9
10	359,441 22	15,255 61	106,516 11	84,392 84	565,605 78	145,350 39	39,541 00	4,057 23	6,016 49	18,295 00	52,708 18	3,597 23	78,394 94	56,316 28	16,814 15	421,090 89	144,514 89	10
11	331,838 46	11,665 03	5,920 60	33,607 25	383,031 34	110,451 29	64,774 00	3,874 21	5,745 08	4,275 00	37,382 80	3,318 73	38,114 09	43,522 88	13,139 05	324,597 13	58,434 21	11
12	148,853 77	2,127 47	29,448 16	10,453 31	190,882 71	48,724 70	50,745 00	....	2,593 51	700 00	18,335 35	1,488 64	17,470 30	23,528 01	5,254 10	168,839 61	22,043 10	12
13	87,416 67	†15,025 00	—3,918 05	—53,511 61	45,012 01	16,823 91	9,691 00	....	1,538 18	....	5,922 05	874 42	5,507 54	6,404 49	1,786 80	48,548 39	—3,536 38	13
14	66,599 91	1,177 87	23,347 48	14,896 44	106,021 70	24,024 66	32,148 00	741 27	1,099 24	700 00	9,576 00	666 98	5,667 52	12,508 04	1,631 25	88,762 96	17,258 74	14
15	200,302 96	2,420 88	58,727 17	—11,650 29	249,800 72	65,620 49	61,882 00	2,691 78	3,991 66	1,615 00	23,800 78	2,004 13	47,177 29	35,277 77	7,888 50	251,949 40	—2,148 68	15
16	199,147 21	10,820 97	—48,987 82	29,912 29	190 892 65	53,997 31	23,010 00	2,428 98	3,601 95	1,950 00	15,988 37	1,991 47	12,690 63	20,329 59	4,933 85	140,922 15	49,970 50	16
17	136,829 62	4,461 93	—3,178 45	4,863 81	142,976 91	37,652 62	30,960 00	1,582 14	2,346 16	1,040 00	14,946 70	1,368 50	17,339 41	17,398 40	5,993 20	130,627 13	12,349 78	17
18	28,914 91	2,033 71	5,677 61	19,088 53	55,714 76	10,643 00	7,662 00	247 10	366 43	200 00	4,920 05	289 15	3,341 99	4,569 39	1,081 70	33,320 81	22,393 95	18
19	72,748 94	2,768 09	27,140 61	16,945 34	119,602 98	26,427 56	15,854 00	737 86	1,094 17	2,350 00	10,235 75	727 49	27,067 28	14,339 77	5,145 45	103,979 33	15,623 65	19
20	44,974 93	755 77	14,297 69	14.549 47	74,577 86	23,871 43	18,006 00	....	778 61	....	8,205 45	450 25	8,284 46	10,032 38	823 70	70,452 28	4,125 58	20
21	60,102 34	5,714 79	49,078 89	41,210 26	156,106 28	22,209 74	3,868 00	....	1,079 52	350 00	6,671 30	601 02	19,756 28	9,236 81	3,204 80	66,977 47	89,128 81	21
22	43,110 70	2,640 57	—13,265 94	6,656 21	39,141 54	5,158 37	6,740 00	4,253 51	624 30	....	1,808 55	431 10	3,418 11	5,079 30	1,262 80	28,776 04	10,365 50	22
23	119,328 87	9,354 01	928 67	69,979 40	199,590 95	28,866 27	40,131 00	....	2,411 03	....	7,759 10	1,193 29	13,135 77	16,426 61	7,024 85	116,947 92	82,643 03	23
24	370,531 58	15,417 67	70,591 16	125,950 06	582,490 47	149,690 47	115,125 00	....	7,079 46	375 00	41,635 15	3,706 05	77,536 62	66,545 42	18,254 25	479,947 42	102,543 05	24
All	4,472,913 34	133,181 91	1,072,338 81	585,463 91	6,049,767 13	1,605,715 90	1,241,133 94	45,228 51	81,825 64	50,240 00	551,837 79	44,752 31	690,079 68	719,668 73	200,466 27	5,230,948 77	847,955 73	All
			—69,978 71	—144,152 13													—29,137 37	
			1,002,360 10	441,311 78													818,818 36	

*Adjusted on retroactive rates. †Includes $15,000.00 transferred from Disaster Reserve.

CLASS NUMBERS OF INDUSTRIES.

1. Lumbering.
2. Pulp and paper mills.
3. Furniture mfg., etc.
4. Planing mills, etc.
5. Mining and explosives.
6. Brick mfg., quarrying, and glass works.
7. Rolling mills, etc.
8. Foundries, etc.
9. Fabrication structural steel, etc.
10. Metal articles, jewellery mfg., etc.
11. Agricultural implements, etc.
12. Gas, petroleum, paint, drugs, soap, etc.
13. Milling.
14. Abattoirs, etc.
15. Bakeries, canning, liquors, and tobacco.
16. Tanneries, leather and rubber goods.
17. Textiles.
18. Clothing, power laundries, etc.
19. Printing and stationery.
20. Teaming and cartage.
21. Road construction, etc.
22. Electric power, etc.
23. Steel construction, railway and canal construction, dredging, fishing, etc.
24. Building.

Compensation

The compensation for the accidents of 1920, including estimates for outstanding compensation, is as follows:

Compensation paid other than pensions	$1,605,715 90
Transferred for pensions awarded	1,241,133 94
Compensation—payments deferred	50,240 00
Compensation estimated for continuing disabilities	690,079 68
Compensation estimated for outstanding accidents	719,668 73
Total compensation for the year	$4,306,838 25

Medical Aid

Payments made and estimated still to be paid for medical aid amounted to $752,304.06, of which $551,837.79 was paid and $200,466.27 is estimated to be paid.

Other Expenditures

The other expenditures for the year were:

Paid to Safety Associations	$45,228 51
Balance of administration expenses	81,825 64
Disaster Reserve	44,752 31
Total	$171,806 46

Further Particulars

Further particulars and explanations as to payments and expenses and as to the condition of the several funds will be found in Chapters III and IV and Tables 7 to 13.

CHAPTER II

SCHEDULE 2 INDUSTRIES DURING 1920

Particulars of Schedule 2 matters during 1920 are set out in Table 2. This table shows the total amount of compensation awarded and particulars of the funds handled. Cases referred by the Crown to the Board for adjustment are included.

During the year there was awarded in compensation in Schedule 2 industries $1,963,389.82, of which $1,486,643.12 was for pension awards including necessary retroactive adjustments required by the amending Act taking effect July 1, 1920, and $476,746.70 in awards not pensions. Included in these amounts is $264,699.35, made up of $80,884.35 in awards not pension awards, and $183,815.00 pension awards, in Crown cases, which latter figure includes retroactive pension adjustments.

In pension cases, except in the case of municipal or Government bodies, or departments thereof, not so desiring, deposits must be made by the employers. Particulars of these are given under "Deposits for Pensions." Under "Claimants' Monies" are included monies held by the Board under awards in which in the interest of the claimant, or for other reason, payment of the amounts held is deferred to a later date, as in the case of minors. "Deposits for Temporary Payments" are amounts deposited with the Board to enable the Board to make prompt current payments to workmen for accidents without waiting for receipt of cheque from the employer.

Employers in Schedule 2 are assessed a proportionate share of the expense of administration, other than the amount provided by the Province and by the Dominion Crown as in Table 8. For 1920 that share amounted to $20,363.16, as compared with $11,063.91 in 1919 and $6,246.04 in 1918. Proportionate to the amount of compensation awarded, expenses in Schedule 2 and Crown cases were 1.31 per cent. in 1920, as compared with 1.19 per cent. in 1919.

The net rate of interest during 1920 earned by and credited to Schedule 2 Funds was 5.33 per cent. per annum, as compared with 5.05 per cent. per annum in 1919.

TABLE 2

STATEMENT FOR SCHEDULE 2 DURING 1920

SCHEDULE 2 AWARDS

	Awards Not pensions	Pensions	Totals
Municipal Corporations, etc.	$85,558 97	$250,864 00	$336,422 97
Steam Railroads	265,980 41	872,631 12	1,138,611 53
Electric Railways	12,367 51	97,858 00	110,225 51
Navigation Companies	11,716 50	37,503 00	49,219 50
Express and Sleeping Car Companies	5,463 14	....	5,463 14
Telephone and Telegraph Companies	12,238 79	40,775 00	53,013 79
Under Section 6	....	3,197 00	3,197 00
All others	2,537 03	....	2,537 03
Referred to Board by Crown	80,884 35	183,815 00	264,699 35
	$476,746 70	$1,486,643 12	$1,963,389 82

SCHEDULE 2 FUNDS

Deposits for Pensions

Cash in bank and invested, January 1, 1920	$1,314,177 05	
Deposits received from employers	719,542 19	
Interest received	81,322 04	
Deposits returned to employers		$2,328 78
Paid to pensioners		165,718 85
Cash in bank and invested, December 31, 1920		1,946,993 65
	$2,115.041 28	$2,115,041 28

Claimants' Monies

Cash in bank and invested, January 1, 1920	$99,138 82	
Deposits received from employers	9,457 33	
Interest received	4,836 94	
Paid to claimants—principal		$18,271 90
Paid to claimants—interest		152 09
Cash in bank and invested, December 31, 1920		95,009 10
	$113,433 09	$113,433 09

Deposits for Temporary Payments

Cash in bank, January 1, 1920	$27,031 67	
Deposits received from employers	316,936 10	
Deposits returned to employers		$90 11
Payments made		317,900 45
Cash in Bank, December 31, 1920		25,977 21
	$343,967 77	$343,967 77

TOTALS OF FUNDS

Cash in bank and invested, January 1, 1920, (including unapportioned interest $39.60)	$1,440,387 14	
Deposits received from employers	1,045,935 62	
Interest received	86,128 85	
Deposits returned to employers		$2,418 89
Payments made		502,043 29
Cash in Bank and invested, December 31, 1920, (including unapportioned interest $9.47)		2,067,989 43
	$2,572,451 61	$2,572,451 61

CHAPTER III

WORK HANDLED DURING 1920

Tables 3 to 9 give particulars of the work handled during the year 1920 without regard to the year to which they relate, and also give other information concerning the administration of the Act during the year.

Compensation Awarded During the Year

The total amount of compensation awarded during 1920 was $7,076,439.59, of which amount $5,113,049.77 was in Schedule 1 industries and $1,963,389.82 in Schedule 2 and Crown industries.

The following shows the amount of compensation awarded each year and the total amount awarded since January 1, 1915, the date the Act went into force.

Year	Schedule 1 Industries	Schedule 2 Industries and Crown Cases	Totals
1920	$5,113,049 77	$1,963,389 82	$7,076,439 59
1919	2,808,638 65	997,922 77	3,806,561 42
1918	2,751,137 45	763,511 02	3,514,648 47
1917	2,289,529 44	623,556 37	2,913,085 81
1916	1,559,759 01	451,709 93	2,011,468 94
1915	692,389 09	200,932 03	893,321 12
Totals	$15,214,503 41	$5,001,021 94	$20,215,525 35

Medical Aid Paid During the Year

The amount of medical aid paid in Schedule 1 industries during the year was $703,705.66, which was about 13.8 per cent. of the compensation awarded. The payments for medical aid for each year have been:

1920	$703,705 66
1919	386,298 51
1918	369,346 37
1917	83,514 07
Total	$1,542,864 61

Accidents Compensated During the Year

Table 3 shows the number of accidents in which compensation or medical aid was paid during the year. The total number was 47,851, of which 42,693 were in Schedule 1, 4,444 in Schedule 2, and 714 were Crown cases. Of the 47,851 cases, 387 were awards for death cases, 22 were awards for permanent total disability, in 2,693 there was payment for permanent partial disability, in 28,740 temporary disability was paid for, and in 16,009 medical aid only was paid.

Of the total 47,851 accidents in which payment was made during the year, 5,649 occurred in 1919 and 42,202 in 1920.

The number of accidents in which compensation or medical aid was awarded each year since the commencement of the Act is as follows:

Year	Schedule 1	Schedule 2	Crown	Totals
1920	42,693	4,444	714	47,851
1919	34,400	4,517	153	39,070
1918	36,565	4,335	30	40,930
1917	25,277	3,406	19	28,702
1916	15,370	2,825	13	18,208
1915	8,328	1,494	7	9,829

Accidents Reported During the Year

During 1920 reports were received of 54,851 accidents. These included some accidents not serious enough to involve either payment of compensation or medical aid and for which no claim was made. At the close of the year there were 1,288 cases, 1,033 in Schedule 1 and 255 Schedule 2 or Crown cases, in assembly, notice of the accident having been received but the necessary forms not yet having been received. In 705 compensation cases the claims were proceeding to payment or were under adjustment, there being 579 Schedule 1 cases and 126 Schedule 2 and Crown cases.

The number of accidents reported each year since the commencement of the Act and the total number for the six years is reported below:

Year	Schedule 1	Schedule 2	Crown	Totals
1920	46,177	7,222	1,452	54,851
1919	36,236	7,918	106	44,260
1918	40,662	7,113	73	47,848
1917	30,701	5,813	18	36,532
1916	21,269	4,806	17	26,092
1915	13,878	3,144	11	17,033
Totals	188,923	36,016	1,677	226,616

Claims Reopened

In addition to Schedule 1 claims compensated as shown in Table 3, the Board in 1920 reopened 632 claims for further action. Of these, 541 were death cases in which additional capitalized values were computed by reason of the amending Act taking effect July 1, 1920, 6 were cases in which final award for temporary or permanent disability had been made but in which death subsequently ensued, 17 were cases of foreign-born pensioners returning to their native land, commutation being made of their pension, and 68 cases of other awards previously made being changed in form or amount. In Schedule 2 and Crown death claims readjustment was also made in accordance with the amending Act.

Assessments Issued and Refunds Made

During the year 1920 there were 19,264 assessments issued and 1,414 refunds of assessments made. Of these, 867 were assessments and 519 refunds of assessments made on account of merit rating.

Wage Expenditure in Schedule 1

Table 4 shows for each class of industry in Schedule 1 an estimate of the total pay roll for the class.

The total wage expenditure for the various years is as follows:

Year.	Wage Expenditure.
1915 (final figures)	$147,602,561 67
1916 (final figures)	220,839,658 19
1917 (final figures)	286,902,695 73
1918 (final figures)	310,450,067 17
1919 (final figures)	325,225,970 37
1920 (provisional figures)	436,127,337 98
Total in Schedule 1	$1,727,148,291 11

The Board has no similar data for Schedule 2 or Crown industries as the pay rolls are not reported.

Average Rates of Assessment

For 1919 the total wage expenditure in Schedule 1 industries was $325-225,970.37 and the net receipts $3,959,930.32. The average charge for each $100 of pay roll was, therefore, $1.22, as compared with $1.09 for 1918, 99 cents for 1917, $1.09 for 1916, and $1.27 for 1915. The estimated average rate of assessment for 1920, based on provisional figures, is $1.25 as compared with $1.22 for 1919 and $1.09 for 1918, the increase being due to the increase in compensation benefits taking effect July 1, 1920.

Receipts and Payments and Balance

Receipts and payments during 1920 are set out in Table 5. The cash in bank, December 31, 1920, totalled $199,150.13, of which amount $26,026.35 was on account of Schedule 2, $6,429.99 on account of Schedule 1 Pension Fund, and $166,693.79 on account of Schedule 1 Current Fund.

Table 6 gives the balance sheet as at December 31, 1920. The assets totalled $11,922,479.08, of which $9,854,489.65 was on account of Schedule 1, and $2,067-989.43 was on account of Schedule 2. The liabilities amounted to $9,035,671.29 in Schedule 1 and $2,067,989.43 in Schedule 2. The balance to the credit of the classes in Schedule 1 was, therefore, $818,818.36.

To Table 6 is appended the Auditor's Certificate.

Payments to Safety Associations

Table 7 gives the payments to the Safety or Accident Prevention Associations, and includes the names of the associations, the names and salaries of the inspectors, and the amounts paid for salaries and for travelling expenses and granted for other expenses during the year.

Administration Expenses

Table 8 contains the amount of administration expenses analyzed by expenditure. The total amount of administration expenses paid by the Board during 1920 was $207,051.77 as compared with $167,844.75 in 1919. Of this amount $4,862.97 was charged to the Dominion of Canada and $418.87 to the Province of Ontario. The Province, under Section 68 of the Act, contributed $99,581.13 (being $100,000 less its share of administration expenses) to the expenses of administration as well as paying the salaries of the members of the Board, and up to December 1, 1920, furnished office accommodation, including lighting and heating. Of the balance of $102,188.80, $20,363.16 was charged against Schedule 2 employers and $81,825.64 against Schedule 1 employers. The details of all disbursements of administration expenses appear from year to year in the Public Accounts of the Province.

The cost of administration borne by Schedule 1 employers in 1920 was 1.41 per cent. of the compensation and medical aid awarded during the year, or 1.55 per cent. of the net assessments received during the year, which figures are comparable to 1.75 per cent. and 1.71 per cent., respectively, for the year 1919.

The names, positions, and salaries of the staff of the Board are given in Table 9.

TABLE 3

COMPENSATION, MEDICAL AID, AND ACCIDENTS PAID FOR, DURING 1920

Compensation Awarded During 1920

Schedule 1	$5,113,049 77
Schedule 2	1,963,389 82
Total	$7,076,439 59

Medical Aid Paid During 1920

Schedule 1	$703,705 66
Schedule 2	furnished by employer

Accidents Paid for During 1920

Year of Occurrence	Temp. Dis.	Perm. Partial Dis.	Perm. Total Dis.	Death	Totals
Schedule 1—					
1919 Finally disposed of	2,324	778	10	36	3,148
1920 Finally disposed of	20,170	1,618	2	207	21,997
1920 Partially disposed of	1,527	......	....	12	1,539
1919 Medical Aid only	1,883	......	....	......	1,883
1920 Medical Aid only	14,126	......	....	......	14,126
Totals	40,030	2,396	12	255	42,693
Schedule 2—					
1919 Finally disposed of	405	110	6	22	543
1920 Finally disposed of	3,424	133	2	88	3,647
1920 Partially disposed of	252	......	....	2	254
Totals	4,081	243	8	112	4,444
Crown Cases—					
1919 Finally disposed of	52	17	1	5	75
1920 Finally disposed of	525	37	1	15	578
1920 Partially disposed of	61	......	....	......	61
Totals	638	54	2	20	714
Grand totals	44,749	2,693	22	387	47,851

TABLE 4

ESTIMATE OF WAGE EXPENDITURE, SCHEDULE 1 BY CLASSES, FOR 1920

Class	Wage Expenditure.	Class	Wage Expenditure.
1	$29,368,850 44	14	$9,050,615 32
2	18,145,031 19	15	24,459,811 24
3	13,862,644 08	16	23,091,721 64
4	13,369,097 11	17	22,217,193 86
5	20,300,445 30	18	24,346,143 64
6	12,322,185 81	19	20,780,113 80
7	13,288,349 01	20	3,939,575 84
8	17,462,475 94	21	5,305,799 53
9	26,601,327 55	22	2,967,253 68
10	39,477,584 68	23	4,752,541 01
11	36,118,439 08	24	30,910,965 34
12	17,406,366 43		
13	6,582,806 46	Total	$436,127,337 98

TABLE 5

STATEMENT OF RECEIPTS AND PAYMENTS, DURING 1920

Current Fund

RECEIPTS.

Jan. 1. 1920.		
Cash in Dominion Bank	$56,937 80	
Cash in Standard Bank	5,016 95	
		$61,954 75
Assessments, Penalties, etc. collected		5,708,186 25
Received under Section 9		3,442 22
Received under Section 93a		4,557 34
Received under Section 99 (3)		196 46
Received for Interest on Funds		130,116 32
Received under Merit Rating		212,810 02
Received from Consolidated Revenue Fund to apply on account Administration Expenses		99,581 13
Received from Crown for 1920 Administration Expenses		418 87
Received from Schedule 2 employers for 1919 expenses paid out of Schedule 1 in 1919		11,082 69
Received from Investments, Principal Repaid		139,105 56
		$6,371,451 61

PAYMENTS.

Compensation Paid other than Pensions and Compensation Deferred		$2,077,460 05
Deferred Compensation Paid, Principal		36,517 75
Deferred Compensation Paid, Interest		3,454 09
Transferred for Pensions Awarded		2,966,589 72
Paid on Merit Rating		164,750 27
Administration Expenses (of which $4,862.97 was apportioned to Dominion of Canada; $418.87 to Province of Ontario; $99,581.13 was contributed by the Province; and the balance, $102,188.80, apportioned as follows: $81,825.64 to Schedule 1 employers, and $20,363.16 to Schedule 2 employers)		207,051 77
Medical Aid Paid		703,705 66
Paid to Safety Associations		45,228 51
Dec. 31, 1920.		
Cash in Dominion Bank	$160,552 73	
Cash in Standard Bank	6,141 06	
		166,693 79
		$6,371,451 61

Pension Fund

RECEIPTS.

Jan. 1, 1920.	
Cash in Bank of Montreal	$523 92
Transferred from Current Fund for Pensions Awarded	2,966,589 72
Interest Received	273,417 46
	$3,240,531 10

PAYMENTS.

Pensions paid	$474,093 93
Invested in Debentures	2,760,007 18
Dec. 31, 1920.	
Cash in Bank of Montreal	6,429 99
	$3,240,531 10

Schedule 2 Funds

RECEIPTS.

Jan. 1, 1920.	
Cash in Imperial Bank	$80,168 52
Deposits by employers on order of Board—	
For Claimants' monies	9,457 33
For Pensions	719,542 19
Under Section 31a	316,936 10
Interest Received	86,128 85
	$1,212,232 99

PAYMENTS.

Claimants' Monies—		
Paid as Principal	$18,271 90	
Paid as Interest	152 09	
		$18,423 99
Paid on Pensions		165,718 85
Paid out of Deposits under Section 31a		317,900 45
Deposits returned to employers—		
Deposits for Pensions		2,328 78
Deposits under Section 31a		90 11
Permanent Investments		681,744 46
Dec. 31, 1920.		
Cash in Imperial Bank		26,026 35
		$1,212,232 99

TABLE 6

BALANCE SHEET AS AT DECEMBER 31, 1920

Assets.		
Cash in Banks—		
Dominion Bank	$160,552 73	
Standard Bank	6,141 06	
Bank of Montreal	6,429 99	
		$173,123 78
Short Date Deposits		600,000 00
Municipal Debentures		5,384,649 67
Dominion of Canada, Victory Loan		2,668,218 62
Due by Schedule 2 employers for Administration Expenses paid out of Schedule 1 Funds		20,367 98
Due by Dominion of Canada for Administration Expenses paid out of Schedule 1 Funds		5,769 50
Assessments estimated to be due on adjustment of 1920 Pay Rolls		1,002,360 10
		$9,854,489 65

Liabilities.	
Deferred Payments accruing under awards made	$168,517 30
Compensation estimated for continuing disabilities	690,079 68
Compensation estimated for outstanding accidents	719,668 73
Medical Aid estimated	200,466 27
Disaster Reserve	151,639 30
Pension Liability	7,105,300 01
Balance at credit of Classes (Table 1)	818,818 36
	$9,854,489 65

Schedule 2 Funds

Assets.	
Cash in Imperial Bank	$26,026 35
Dominion of Canada, Victory Loan	1,793,718 72
Toronto Harbour Commissioners Debentures	248,244 36
	$2,067,989 43

Liabilities.	
Employers' Deposits for Pensions and Interest earned	$1,946,993 65
Employers' Deposits for Temporary Payments	25,977 21
Claimants' Monies held by Board and Interest earned	95,009 10
Unapportioned Interest	9 47
	$2,067,989 43

Auditor's Certificate

I have conducted a continuous audit of the books and accounts of The Workmen's Compensation Board, Ontario, to the 31st December, 1920, including the examination of the receipts from Assessments; from Interest on Investments, and receipts from all other sources; I have examined the orders of the Board for disbursements; the bank cheques and other vouchers; verified the bank transactions and balances; examined the debentures and other securities, and hereby certify that the books have been carefully and correctly kept, and that the Provisional Statement of Income and Expenditure, Schedule 1 by Classes, for the year 1920 (Table 1), the Financial Statement for 1919, Schedule 1 by Classes (Table 14), the Statement of Disaster Reserve (Table 11), of Compensation Deferred (Table 12), of Receipts and Payments, Current Fund, Pension Fund, and Schedule 2 Funds, during 1920 (Table 5), and the Statement of Assets and Liabilities, Schedule 1, and Schedule 2, as at December 31st, 1920 (Table 6), in my opinion carry into effect the rulings of the Board, and correctly set forth the financial transactions of the Board, and are in accordance with the Books.

(Signed) Albert J. Walker,
Chartered Accountant,
Auditor.

Toronto, March 31st, 1921.

TABLE 7

PAYMENTS TO SAFETY OR ACCIDENT PREVENTION ASSOCIATIONS, 1920

Association	Class	Inspectors	Salaries	Paid for Salaries	Travelling Expenses	Grants for Expenses	Total Paid
			$ c	$ c.	$ c.	$ c.	$ c.
Lumbermen's Safety Association......	1	R. F. Milne	2,400 00 a year	2,400 00	1,427 19	1,150 00	4,977 19
The Ontario Pulp and Paper Makers' Safety Association	2	A. P. Costigane ..	250 00 a month	3,000 00	837 83	1,000 00	4,837 83
Industrial Accident Prevention Associations	3						
	4						
	6						
	7	F. G. Lovett	2,240 00 a year	2,240 00	1,159 75		
	8	A. E. Hawker....	2,240 00 "	2,240 00	755 95		
	9	D. J. Hay	2,240 00 "	2,240 00	853 10		
	10	S. Twist.........	2,240 00 "	2,240 00	912 19		
	11	Thomas Wilson...	2,240 00 "	2,240 00	876 28		
	14	A. Duncan	2,240 00 "	2,240 00	617 31		
	15	V. L. Mummery.	2,040 00 "	2,040 00	1,005 40	9,500 00	31,159 98
	16						
	17						
	18						
	19						
Electrical Employers' Association of Ontario	22	Wills Maclachlan	2,500 00 "	2,500 00	753 51	1,000 00	4,253 51
				23,380 00	9,198 51	12,650 00	45,228 51

TABLE 8

ANALYSIS OF ADMINISTRATION EXPENSES DURING 1920

Salaries of Staff	$137,504 29	
Travelling expenses of Board and Staff	6,718 99	
Printing, stationery and office supplies	22,519 39	
Postage and War Tax	18,236 80	
Telephone, telegrams, and express	564 22	
Legal expenses, witness fees, etc	301 57	
Medical examinations, X-ray plates, etc	2,011 35	
Workmen's travelling expenses	1,864 80	
Assessors' returns	1,102 00	
Insurance and security service	526 30	
Rent of premises and caretaking	4,400 89	
Equipment of vault, including safe	4,446 25	
Office alterations	306 47	
Permanent office equipment	6,487 23	
Sundry expenses	61 22	
Total Administration Expenses, 1920	$207,051 77	
Less Charged to Dominion of Canada	4,862 97	
	$202,188 80	
Contributed by Province under Section 68, being $100,000 less $418.87 proportionate share of administration expenses of Provincial Government cases	99,581 13	
Balance to be provided for		$102,607 67
Charged to Province of Ontario	418 87	
Charged to Schedule 2 employers	20,363 16	
Charged to Schedule 1 employers	81,825 64	
		$102,607 67

TABLE 9

SALARIES OF STAFF, WITH NAMES AND POSITIONS, 31ST DECEMBER, 1920

Name.	Position.	Salary Exclusive of Bonus.
Dr. W. E. Struthers	Medical Officer	$4,500 00 per year.
N. B. Wormith	Secretary	4,250 00 " "
W. N. Hancock	Claims Officer	4,250 00 " "
Dr. D. E. Bell	Medical Officer	4,000 00 " "
T. N. Dean	Statistician	3,750 00 " "
A. J. Walker	Auditor	3,250 00 " "
Dr. J. M. Bremner	Assistant Medical Officer	3,200 00 " "
L. M. Miller	Medical Aid Officer	2,600 00 " "
R. W. Dance	Assistant Secretary	2,600 00 " "
H. R. Polson	Pay Roll Officer	2,250 00 " "
F. W. Graham	Assistant Claims Officer	2,000 00 " "
H. F. Hall	Pay Roll Auditor	2,000 00 " "
W. C. Bayly	" " "	2,000 00 " "
G. N. Whiteside	" " "	2,000 00 " "
E. E. Starr	" " "	1,900 00 " "
Harold Pryce	Cashier	1,900 00 " "
F. A. McNamara	Pay Roll Auditor	1,850 00 " "
J. W. Tucker	Claims Clerk	1,850 00 " "
John Scott	Assessment Clerk	1,850 00 " "
John J. Hayward	Assistant to Medical Officers	1,850 00 " "
Samuel Holland	Assistant to Medical Aid Officer	1,800 00 " "

TABLE 9—Continued

Name.	Position.	Salary Exclusive of Bonus.
E. P. Dowdall	Claims Clerk	$1,800 00 per year.
W. B. Terry	Assistant Cashier	1,800 00 " "
O. L. Redfern	Bookkeeper	1,750 00 " "
Geo. E. Heal	"	1,650 00 " "
J. D. Hunter	"	1,600 00 " "
Geo. Chambers	Pay Roll Auditor	150 00 per month
A. E. Flower	" " "	150 00 " "
Chas. G. Cameron	Clerk	125 00 " "
W. B. Cross	"	120 00 " "
W. G. Perry	Messenger and Clerk	115 00 " "
F. G. Waters	Clerk	115 00 " "
L. K. Knowles	"	105 00 " "
Ethel McFarlane	Commissioner's Stenographer and Clerk	95 00 " "
Edna Pack	Chairman's Stenographer and Clerk	90 00 " "
Gladys Pim	Stenographer and Clerk	85 00 " "
Sara MacPherson	Stenographer	80 00 " "
Mrs. E. McKinnon	"	80 00 " "
Alice E. Smith	"	80 00 " "
Marie Gilbert	"	80 00 " "
Mrs. A. Somers	Switchboard Operator	80 00 " "
Amy E. Heywood	Stenographer	80 00 " "
Mary J. Day	"	75 00 " "
Marjorie Covey	"	75 00 " "
Rita O'Halloran	Clerk	75 00 " "
Mrs. L. Emack	Stenographer	75 00 " "
Mary Stull	Clerk	72 50 " "
Jean L. MacLaren	Stenographer	72 50 " "
Maude A. Baynes	"	70 00 " "
Margaret Hall	Clerk	70 00 " "
Mattie Reid	"	70 00 " "
Hazel Hurst	Stenographer	70 00 " "
Naomi Stevens	"	70 00 " "
Florence Stewart	"	70 00 " "
Cora Thompson	"	67 50 " "
Hilda Lewis	"	65 00 " "
I. F. Acheson	Clerk	65 00 " "
Beulah Stewart	"	65 00 " "
E. Pauline Flint	"	65 00 " "
Mary L. Clark	"	65 00 " "
Kathleen Murray	Stenographer	65 00 " "
Geo. Pim	Junior Clerk	65 00 " "
Cora Fetherston	Clerk	62 50 " "
Violet Miles	"	62 50 " "
Elizabeth Rowland	Stenographer	62 50 " "
Margaret Nicholl	Clerk	60 00 " "
Lena Lawton	Stenographer	60 00 " "
Ethel Christopher	Clerk	60 00 " "
Mabel Thompson	Stenographer	60 00 " "
Ellen Johnson	"	60 00 " "
Valeria Johnston	"	60 00 " "
Mary G. Davis	"	60 00 " "
Mary Heavener	Typist	60 00 " "
Olive MacDonald	Clerk	60 00 " "
Margaret Torry	Stenographer	60 00 " "

Bonus.—All salaries not exceeding $1,200 a year carried a bonus of 30 per cent.; salaries between $1,200 and $2,500 carried a bonus of $30 per month for the first half of the year and $35 per month for the last half; and salaries of $2,500 or over carried a bonus of $20 per month for the first half of the year and $25 per month for the last half.

CHAPTER IV

CONDITION OF FUNDS

Tables 10, 11, and 12 show the condition of the various funds necessary to the administration of the Act, and Table 13 contains particulars of investments as of date December 31, 1920.

Pension Fund

The Pension Fund has been established to take care of future payments of pensions which have been awarded. By the use of mortality and re-marriage tables the capitalized values of pensions at various ages, on a basis of 5 per cent. interest, were ascertained. When a pension is awarded the average capitalized value as at the age of each dependant is found and the amount is transferred from current funds to the Pension Fund, regard having been had to the year and class in which the accident occurred. Since the amount transferred in any one instance is the average amount required for pensions, any residue at expiry of pension payments remains in the Pension Fund.

Particulars of the Pension Fund for each class is shown in Table 10. At the beginning of 1920 there was a balance of $4,339,386.76, to which there was added during the year $2,966,589.72 in pension awards and $273,417.46 in interest, and there was paid out in pension payments $474,093.93. The balance in the Pension Fund at the end of 1920 was, therefore, $7,105,300.01.

The amending Act taking effect July 1, 1920, required increases in capitalized values of pensions previously awarded to the amount of $1,338,842.99.

Disaster Reserve

Table 11 contains particulars of the Disaster Reserve. This is a reserve established under the authority of Section 88 (2) of the Act, and is intended to be used in case of disaster or other special circumstance, which, in the opinion of the Board, would unfairly burden the employers of any one class. The amounts comprised in this reserve, namely, one per cent. of the gross assessments and interest earned thereon, are the only monies set aside by the Board which do not directly liquidate liabilities incurred by reason of accidents which have happened already.

The amount of the Disaster Reserve at the end of 1920 was $151,639.30. To the balance of $102,888.09 forward from 1919 was added in reserve $57,177.37 and in interest $6,573.84, and there was $15,000.00 placed to the credit of Class 13.

Compensation Deferred

Table 12 comprises the amounts of compensation awarded but where payments are deferred, except pensions. The total amount accruing during the year was $208,189.14, of which $69,100.00 was deferred during 1920, $131,711.19 had accrued prior to January 1, 1920, and $7,677.95 was added as interest for interest-bearing awards. Payments during 1920 amounted to $39,971.84, leaving $168,517.30 accruing December 31, 1920.

Investments

In Table 13 are listed particulars of investments of the Board. Therein are shown the kind of investment, particular security, yield of interest, term, par value, and cost value. With the exception of short date deposits of current funds, intended for use before the year's assessments are received, all investments consist of municipal or municipally guaranteed debentures and Dominion of Canada War Loans. The average rate of interest received on permanent investments during 1920 was approximately 5.68 per cent. Three per cent. is received on current bank balances.

TABLE 10

PENSION FUND, SCHEDULE 1 BY CLASSES, DECEMBER 31, 1920

Class	Balance at Jan. 1, 1920	Pension Awards during 1920	Interest Received	Pension Payments	Balance at Dec. 31, 1920	Class
	$ c.	$ c.	$ c.	$ c.	$ c.	
1	378,905 11	350,394 00	25,973 52	46,980 79	708,291 84	1
2	188,719 00	175,361 36	12,884 22	26,376 78	350,587 80	2
3	58,109 51	57,521 00	4,058 02	7,937 73	111,750 80	3
4	193,377 29	125,122 29	11,998 27	21,652 39	308,845 46	4
5	614,669 72	276,514 71	35,482 84	56,099 66	870,567 61	5
6	130,174 91	163,578 00	9,918 13	18,693 38	284,977 66	6
7	294,915 93	141,634 23	17,175 43	29,713 64	424,011 95	7
8	98,009 68	40,983 75	5,557 30	9,943 42	134,607 31	8
9	247,709 15	226,374 49	16,941 60	29,593 84	461,431 40	9
10	454,219 66	187,157 60	25,776 65	42,417 25	624,736 66	10
11	219,835 32	143,156 71	13,660 91	24,670 77	351,982 17	11
12	118,172 81	109,989 78	8,147 17	13,458 82	222,850 94	12
13	134,306 20	102,038 62	8,682 35	15,908 27	229,118 90	13
14	50,950 48	48,237 00	3,561 82	4,609 32	98,139 98	14
15	151,454 91	144,188 00	10,470 02	19,314 58	286,798 35	15
16	122,525 50	67,987 00	7,372 03	11,832 25	186,052 28	16
17	143,516 96	68,537 80	8,356 16	14,156 24	206,254 68	17
18	26,321 11	13,591 06	1,570 84	2,052 16	39,430 85	18
19	42,116 85	35,452 37	2,815 60	4,646 47	75,738 35	19
20	43,678 80	37,114 00	2,932 70	4,647 41	79,078 09	20
21	55,323 78	23,870 82	3,170 99	4,958 39	77,407 20	21
22	57,912 35	33,016 00	3,511 07	5,385 56	89,053 86	22
23	137,042 12	116,877 22	9,180 60	15,861 09	247,238 85	23
24	377,419 61	277,891 91	24,219 22	43,183 72	636,347 02	24
	4,339,386 76	2,966,589 72	273,417 46	474,093 93	7,105,300 01	

TABLE 11

DISASTER RESERVE, DECEMBER 31, 1920

Disaster Reserve as at December 31, 1919	$102,888 09
Amount placed at credit of Disaster Reserve in 1920	57,177 37
Interest added in 1920	6,573 84
	$166,639 30
Amount placed at credit of Class 13	15,000 00
Balance as at December 31, 1920	$151,639 30

TABLE 12

COMPENSATION DEFERRED, DECEMBER 31, 1920

Total amount accruing, December 31, 1919		$131,711 19
Compensation deferred, 1920		69,100 00
Interest added, 1920		7,677 95
		$208,489 14
Amounts paid in 1920 on compensation deferred:		
Principal	$36,517 75	
Interest	3,454 09	
		39,971 84
Total amount accruing, December 31, 1920		$168,517 30

TABLE 13

PARTICULARS OF INVESTMENTS, DECEMBER 31, 1920

SCHEDULE 1 FUNDS

Municipal Debentures

Security.	Yield Rate	Term.	Par Value.	Cost Value.
Amherstburg, Town of..........	5½%	1920–1938	$23,600 00	$24,512 11
Arthur, Village of..............	5½%	1920–1928	1,375 69	1,348 31
Arthur, Village of..............	5½%	1920–1930	2,311 38	2,201 88
Brampton, Town of............	5½%	1920–1934	16,665 53	17,193 48
Brampton, Town of............	5½%	1920–1944	3,228 87	2,929 54
Brantford, City of	6¼%	Dec. 31, 1942	10,000 00	7,923 00
Brantford, City of..............	6.20%	1924–1939	100,000 00	94,528 35
Brantford Industrial Realty Co., guaranteed by City of Brantford.....................	5½%	Oct. 15, 1924	40,000 00	40,000 00
Carleton Place, Town of........	5½%	1930–1941	14,659 99	14,659 99
Cobourg, Town of..............	5.30%	Jan. 1, 1934	6,000 00	5,832 43
Creemore, Village of............	5⅜%	1921–1934	5,267 37	5,477 84
Dundas, Town of...............	5⅜%	1920–1946	23,501 28	23,791 98
Essex, Village of...............	5½%	1920–1934	6,739 59	6,529 21
Fort William, City of...........	5¾%	Feb. 1, 1944	25,000 00	22,599 66
Fort William, City of...........	6.40%	May 1, 1950	10,000 00	9,472 45
Galt, City of..................	5.20%	June 6, 1924	20,500 00	19,721 99
Galt, City of..................	5.60%	Oct. 30, 1940	42,000 00	36,483 56
Glencoe, Village of.............	6¾%	1921–1940	18,000 00	16,525 96
Guelph, City of................	5.18%	June 22, 1935	30,000 00	27,938 06
Hamilton, City of..............	5.20%	Apr. 1, 1934	40,000 00	37,308 01
Hamilton, City of..............	5⅞%	1935–1937	8,740 84	7,969 48
Hamilton, City of..............	5⅞%	1935–1937	93,496 15	85,244 05
Hamilton, City of..............	6%	1928–1929	24,000 00	22,512 18
Hamilton, City of..............	6%	May 1, 1934	35,000 00	30,189 15
Hamilton, City of..............	6.05%	1927–1928	82,198 33	81,967 04
Hamilton, City of..............	5.30%	1934–1937	99,904 55	101,950 48
Hamilton, City of..............	5.30%	1926–1931	100,784 03	102,104 75
Hamilton, City of..............	5⅜%	1922–1939	37,298 33	37,461 58
Hamilton, City of..............	5⅞%	1934–1939	101,821 65	92,470 34
Hamilton, City of..............	6%	1932–1940	93,849 28	93,849 28
Hamilton, City of..............	6½%	Apr. 1, 1930	19,000 00	15,781 37
Hastings, County of............	5½%	1921–1935	6,530 69	6,285 63
Hawkesbury, Town of..........	7¼%	1928–1940	73,322 59	68,631 45
Hawkesbury, Town of..........	7¼%	1928–1931	4,935 73	4,597 14
Hespeler, Town of..............	5½%	1925–1934	15,768 59	15,768 59
Kingston, City of..............	6.10%	1922–1948	5,600 00	5,538 13
Kingston, City of..............	6⅛%	Jan. 1, 1930	50,000 00	49,575 00
Kingston, City of..............	6⅛%	1931–1945	52,400 00	51,694 21
Kitchener, City of..............	5¾%	1921–1934	19,739 75	19,570 31
Kitchener, City of..............	5¾%	1921–1926	2,512 78	2,510 99
Kitchener, City of..............	5¾%	1921–1946	1,228 12	1,197 91
Kitchener, City of..............	6⅛%	1921–1932	11,021 75	10,364 01
Leamington, Town of...........	5⅞%	1922–1932	15,672 59	15,780 84
Lincoln, County of.............	5½%	June 10, 1936	36,000 00	36,000 00
Lincoln, County of.............	6.10%	June 30, 1927	11,000 00	10,633 50
Lindsay, Town of..............	5.40%	1925&1935	19,904 78	20,065 40
Listowel, Town of..............	5⅞%	1921–1947	19,125 59	18,408 97
London, City of................	5½%	Aug. 3, 1939	24,000 00	19,789 24
London, City of................	5½%	1937 & 1938	11,000 00	9,785 64
London, City of................	6⅛%	Mar. 1, 1928	50,000 00	49,630 00
London, City of................	5.40%	Aug. 1, 1939	39,000 00	32,562 74
London, City of................	6.55%	June 30, 1942	25,000 00	18,477 04
Newmarket, Town of...........	5½%	1921–1926	7,036 58	6,925 45
Niagara Falls, City of..........	5½%	1922–1926	7,849 65	7,742 32
Niagara Falls, City of..........	6¼%	1930–1936	33,290 44	29,893 36
North Bay, Town of............	6%	1921–1942	8,176 94	7,745 89
North Toronto, Town of........	6.05%	1935–1942	20,246 58	16,826 01
Oakville, Town of..............	5½%	1921–1935	6,264 30	6,474 14
Oakville, Town of..............	6⅝%	1921–1928	6,409 06	6,253 50

Table 13.—Continued

Security.	Yield Rate.	Term.	Par Value.	Cost Value.
Oakville, Town of	6⅝%	1921–1932	12,870 12	12,440 35
Oakville, Town of	6⅝%	1921–1922	2,176 20	2,157 31
Orillia, Town of	5.40%	1926–1934	25,523 59	24,755 86
Oshawa, Town of	6¾%	1922–1935	75,360 86	71,950 70
Ottawa, City of	5.05%	Jan. 1, 1934	100,000 00	94,803 96
Ottawa, City of	5½%	1931&1941	39,906 66	33,136 72
Ottawa, City of	6%	1921–1937	109,992 00	106,187 58
Ottawa, City of	5¼%	1932–1945	118,766 39	122,247 68
Ottawa, City of	5¼%	July 1, 1929	15,000 00	14,745 51
Ottawa, City of	6.12%	July 1, 1939	10,800 00	8,285 39
Ottawa, City of	6.13%	Jan. 9, 1933	25,000 00	21,477 74
Ottawa, City of	6.10%	1937–1938	66,762 58	59,052 96
Oxford, County of	6¼%	1933–1936	9,963 03	8,796 45
Parry Sound, Town of	6½%	1931–1944	30,690 22	29,253 06
Parry Sound, Town of	7⅛%	1937–1950	50,235 30	44,833 83
Peel, County of	5½%	1921–1927	28,886 48	28,886 48
Penetanguishene, Town of	5½%	1921–1924	2,296 27	2,269 85
Penetanguishene, Town of	5½%	1921–1928	5,186 73	5,083 50
Perth, Town of	5½%	1921–1934	4,413 44	4,413 44
Perth, Town of	5½%	1921–1943	3,666 33	3,499 56
Perth, Town of	5½%	1921–1944	454 25	432 95
Perth, Town of	5½%	1921–1934	513 54	497 51
Perth, Town of	5½%	1921–1933	1,305 14	1,266 73
Peterborough, City of	5.40%	Dec. 31, 1935	12,000 00	12,122 30
Peterborough, City of	5.18%	June 30, 1946	50,000 00	48,734 55
Peterborough, City of	6.10%	Dec. 31, 1946	15,000 00	12,862 18
Peterborough, City of	6.205%	June 30, 1950	155,000 00	150,723 84
Port Arthur, City of	5¾%	Jan. 1, 1934	25,000 00	23,299 68
Port Arthur, City of	6⅝%	Jan. 1, 1942	11,193 32	9,146 06
Port Arthur, City of	6.595%	June 1, 1940	100,000 00	93,523 85
Port Arthur, City of	6.80%	Jan. 1, 1943	17,520 00	13,947 46
Port Arthur, City of	6.95%	Jan. 1, 1932	9,246 66	7,524 46
Port Arthur, City of	7.05%	July 1, 1932	7,786 66	6,579 08
Preston, Town of	5.30%	1921–1928	11,292 03	11,556 75
Preston, Town of	6½%	1928–1937	14,760 66	13,538 31
Renfrew, Town of	5¾%	1921–1935	10,407 44	10,596 70
Renfrew, Town of	5.85%	1921–1947	10,966 56	11,124 42
Richmond Hill, Village of	5½%	1921–1944	9,049 16	9,049 16
St. Catharines, City of	5½%	July 13, 1929	25,000 00	24,121 95
St. Catharines, City of	5.385%	Dec. 29, 1945	50,000 00	47,372 51
St. Catharines, City of	5½%	1925–1936	52,460 47	50,365 71
St. Catharines, City of	6⅜%	1921–1927	58,802 53	57,104 48
St. Catharines, City of	6⅓ %	1921–1940	50,000 00	50,654 41
St. Catharines, City of	6⅓ %	1921–1940	58,000 00	57,724 80
St. Mary's, Town of	5½%	Oct. 31, 1943	4,870 30	4,563 86
St. Mary's, Town of	5½%	Jan. 1, 1944	2,500 00	2,339 05
St. Mary's, Town of	5½%	May 1, 1933	17,000 00	16,225 02
Sandwich, Town of	5⅝%	1925–1935	10,261 51	10,503 72
Sandwich, Town of	6⅝%	1928–1943	21,580 60	20,249 03
Sandwich, Town of	6½%	1938–1940	6,774 32	6,410 56
Sandwich, Town of	6½%	1931–1949	43,418 33	41,003 60
Sarnia, City of	5.40%	1921–1926	6,600 68	6,517 10
Sarnia, City of	5⅜%	1921–1926	41,449 02	42,430 39
Sarnia, City of	6½%	1924-1939	15,378 21	14,306 53
Sarnia, City of	6½%	1922–1924	2,771 97	2,732 13
Sault Ste. Marie, City of	5½%	Mar. 25, 1949	24,771 50	26,543 72
Sault Ste. Marie, City of	6.40%	Apr. 1, 1950	45,000 00	39,658 55
Sault Ste. Marie, City of	6.55%	Mar. 1, 1935	100,000 00	94,901 13
Simcoe, Town of	5½%	1921–1945	16,316 53	16,985 11
Smith's Falls, Town of	5¾%	1924–1947	14,101 98	13,693 81
Smith's Falls, Town of	5½%	1926–1944	13,457 01	13,457 01
Smith's Falls, Town of	5½%	1926–1931	10,326 48	10.326 48
Smith's Falls, Town of	5½%	1921–1946	17,948 67	18,858 76
Smith's Falls, Town of	5½%	1921–1936	2,004 41	2,075 06
Smith's Falls, Town of	5¾%	1921–1937	5,267 71	5,172 51
Stamford, Village of	5¼%	1921–1925	4,578 58	4,673 54
Stratford, City of	5½%	Jan. 1, 1934	3,000 00	2,863 23
Stratford, City of	5½%	Jan. 1, 1945	25,000 00	23,356 00

Table. 13—Continued

Security.	Yield Rate.	Term.	Par Value.	Cost Value.
Stratford, City of	5½%	Jan. 1, 1945	15,000 00	14,013 60
Stratford, City of	5½%	Jan. 1, 1945	10,000 00	9,342 40
Stratford, City of	5.58%	1925 & 1945	36,000 00	34,441 69
Sudbury, Town of	5¾%	1933–1935	25,263 80	23,560 39
Sudbury, Town of	7%	1930–1937	32,897 38	27,233 19
Tillsonburg, Town of	5½%	Mar. 20, 1945	975 00	975 00
Tillsonburg, Town of	5½%	1921–1944	1,357 28	1,357 28
Tillsonburg, Town of	5½%	1921–1935	4,115 71	4,115 71
Tillsonburg, Town of	5½%	1921–1935	2,057 80	2,057 81
Toronto, City of	6%	1925–1933	77,000 00	71,711 94
Toronto, City of	6%	1927–1938	32,000 00	29,360 46
Toronto, City of	6%	July 1, 1930	28,000 00	25,994 67
Toronto, City of	6%	July 1, 1931	30,000 00	27,687 75
Toronto, City of	6.05%	1926–1929	83,000 00	78,208 41
Toronto, City of	6%	1932–1937	41,000 00	39,073 29
Toronto, City of	6%	1940–1943	60,000 00	52,895 91
Toronto, City of	5.30%	1935–1937	100,000 00	102,065 13
Toronto, City of	5.30%	July 1, 1948	4,866 66	3,956 19
Toronto, City of	5.25%	July 1, 1942	10,000 00	9,680 09
Toronto, City of	6¼%	1926 & 1927	31,000 00	29,855 20
Toronto, City of	6¼%	1926 & 1927	11,000 00	10,562 74
Toronto, City of	6¼%	Dec. 1, 1926	3,000 00	2,888 85
Toronto, City of	6¼%	1926 & 1927	10,000 00	9,634 75
Toronto, City of	6%	1937–1939	16,000 00	15,134 62
Toronto, City of	6%	Apr. 1, 1938	4,000 00	3,785 13
Toronto, City of	6%	1937 & 1938	7,000 00	6,632 05
Toronto, City of	6.08%	July 1, 1948	29,200 00	21,134 79
Toronto, City of	6.08%	July 1, 1945	7,000 00	6,043 26
Toronto, City of	6.08%	July 1, 1948	4,000 00	3,160 77
Toronto, City of	6.05%	July 1, 1948	6,326 66	4,599 14
Toronto, City of	6.05%	Apr. 1, 1936	24,000 00	22,684 34
Toronto, City of	6.06%	July 1, 1936	3,000 00	2,683 26
Toronto, City of	6%	Jan. 1, 1955	19,000 00	14,886 45
Toronto, City of	6%	1931–1937	40,000 00	38,146 00
Toronto, City of	6.44%	1941–1948	269,000 00	256,981 59
Toronto, City of	6.44%	1940–1948	231,000 00	219,658 73
Toronto Harbour Commissioners.	5.30%	Sept. 1, 1953	100,000 00	87,591 77
Toronto Harbour Commissioners.	5.30%	Sept. 1, 1953	200,000 00	175,183 53
Toronto Harbour Commissioners.	5.30%	Sept. 1, 1953	25,000 00	21,897 94
Toronto Junction, Town of (City of Toronto)	6½%	Jan. 2, 1943	33,000 00	25,445 48
Wallaceburg, Town of	5⅝%	1921–1930	6,506 91	6,623 84
Walkerville, Town of	6.60%	1921–1942	35,795 04	34,049 10
Walkerville, Town of	6.25%	1942–1948	17,531 70	15,882 11
Welland, City of	5.40%	Sept. 1, 1934	25,000 00	25,243 39
Welland, City of	5.60%	July 1, 1925	24,035 50	23,468 36
Welland, City of	5.40%	Apr. 1, 1939	42,000 00	44,925 26
Welland, County of	5⅜%	Dec. 15, 1945	10,000 00	9,490 80
Weston, Town of	5.43%	1924–1929	22,783 57	23,487 94
Weston, Town of	5½%	1921–1930	4,546 11	4,655 77
Whitby, Town of	5⅜%	1921–1946	14,030 47	14,213 23
Whitby, Town of	5⅜%	1921–1946	4,135 27	4,190 72
Whitby, Town of	5⅜%	1921–1946	6,580 38	6,663 69
Windsor, City of	5.56%	1921–1935	15,497 33	15,416 73
Windsor, City of	5½%	1921–1923	36,000 00	35,719 70
Windsor, City of	5¾%	192 & 1923	9,000 00	8,926 42
Windsor, City of	6½%	1923 & 1924	19,000 00	18,230 16
Woodstock, City of	5⅝%	Dec. 31, 1936	7,045 32	6,223 47
Woodstock, City of	5⅝%	Dec. 31, 1925	6,060 97	5,770 77
Woodstock, City of	5⅝%	Nov. 1, 1938	10,000 00	8,746 80
Woodstock, City of	5⅝%	Nov. 30, 1937	6,000 00	5,273 28
Woodstock, City of	5⅝%	Dec. 31, 1924	1,549 79	1,488 85
York, Township of	5.40%	1922–1936	30,237 77	30,439 97
			$5,685,008 22	$5,384,649 67

Other Permanent Investments

Security.	Yield Rate.	Term.	Par Value.	Cost Value.
Dominion of Canada, Victory Loan.	5.61%	Dec. 1, 1937	$700,000 00	$691,635 20
Dominion of Canada, Victory Loan.	5.61%	Dec. 1, 1937	100,000 00	98,805 03
Dominion of Canada, Victory Loan.	5.61%	Dec. 1, 1937	100,000 00	98,805 03
Dominion of Canada, Victory Loan.	5½%	Nov. 1, 1934	725,252 34	701,217 22
Dominion of Canada, Victory Loan.	5½%	Nov. 1, 1934	200,000 00	200,000 00
Dominion of Canada, Victory Loan.	5½%	Nov. 1, 1934	500,000 00	501,793 53
Dominion of Canada, Victory Loan.	5.91%	Nov. 1, 1934	50,000 00	48,066 17
Dominion of Canada, Victory Loan.	5.95%	Nov. 1, 1934	50,000 00	47,882 57
Dominion of Canada, Victory Loan.	6.30%	Nov. 1, 1934	50,000 00	46,741 95
Dominion of Canada, Victory Loan.	6.315%	Nov. 1, 1934	100,000 00	93,358 90
Dominion of Canada, Victory Loan.	6.315%	Nov. 1, 1934	50,000 00	46,686 99
Dominion of Canada, Victory Loan.	6.26%	Nov. 1, 1934	100,000 00	93,226 03
			$2,725,252 34	$2,668,218 62
Total Permanent Investments, Schedule 1.........			$8,410,260 56	$8,052,868 29

SCHEDULE 2 FUNDS

Security.	Yield Rate.	Term.	Par Value.	Cost Value
Dominion of Canada, Victory Loan.	5.61%	Dec. 1, 1937	$100,000 00	$98,805 03
Dominion of Canada, Victory Loan.	5.61%	Dec. 1, 1937	520,000 00	513,786 15
Dominion of Canada, Victory Loan.	5½%	Nov. 1, 1933	383,347 66	370,643 38
Dominion of Canada, Victory Loan.	5½%	Nov. 1, 1934	100,000 00	100,000 00
Dominion of Canada, Victory Loan.	5½%	Nov. 1, 1934	100,000 00	100,000 00
Dominion of Canada, Victory Loan.	5.91%	Nov. 1, 1934	50,000 00	48,066 17
Dominion of Canada, Victory Loan.	5.91%	Nov. 1, 1934	50,000 00	48,066 17
Dominion of Canada, Victory Loan.	5.91%	Nov. 1, 1934	50,000 00	48,066 17
Dominion of Canada, Victory Loan.	6.26%	Nov. 1, 1934	200,000 00	186,452 10
Dominion of Canada, Victory Loan.	6.26%	Nov. 1, 1934	50,000 00	46,613 01
Dominion of Canada, Victory Loan.	6.26%	Nov. 1, 1934	50,000 00	46,620 55
Dominion of Canada, Victory Loan.	6.26%	Nov. 1, 1934	100,000 00	93,241 09
Dominion of Canada, Victory Loan.	6.315%	Nov. 1, 1934	100,000 00	93,358 90
Toronto Harbour Commissioners Debentures..................	5.70%	Sept. 1, 1953	51,000 00	41,943 48
Toronto Harbour Commissioners Debentures..................	5.30%	Sept. 1, 1953	18 000 00	15,766 52
Toronto Harbour Commissioners Debentures..................	5.30%	Sept. 1, 1953	25,000 00	21,897 94
Toronto Harbour Commissioners Debentures..................	5¼%	Sept. 1, 1953	141,000 00	124,499 75
Toronto Harbour Commissioners Debentures..................	5¼%	Sept. 1, 1953	50,000 00	44,136 67
Total Permanent Investments, Schedule 2.........			$2,138,347 66	$2,041,963 08

SHORT DATE DEPOSITS, SCHEDULE 1

Security.	Yield Rate.	Term.	Amount.
Canada Permanent Mortgage Corporation, Special Deposit........................	5¼%	Withdrawable on call	$200,000 00
Central Canada Loan & Savings Company, Special Deposit........................	5¼%	Mar. 15, 1921........	100,000 00
Central Canada Loan & Savings Company, Special Deposit........................	5½%	Apr. 1, 1921........	100,000 00
Huron & Erie Loan & Savings Company, Special Deposit........................	5¼%	Jan. 15, 1921........	100,000 00
Toronto General Trusts Corporation, Special Deposit........................	5¼%	Feb. 1, 1921........	100,000 00
Total Short Date Deposits, Schedule 1........................			$600,000 00

CHAPTER V

SCHEDULE 1 INDUSTRIES FOR 1919

Tables 14 to 26 contain the final financial statement and the accident statistics for Schedule 1 industries for 1919. All accidents which occurred in these industries during 1919 are included, irrespective of the year in which they were reported or compensated.

Final Financial Figures, 1919

Table 14 gives the final financial figures for 1919 and therefore shows the actual results for that year. These results were provisionally stated in Table 1 of the Report for 1919. The net receipts for the year were $3,959,930.32 and the net charges $4,610,134.02. The net deficit was, therefore, $650,203.70, which, deducted from the balance forward from 1918 of $1,091,515.48, produces a balance to be carried forward from 1919 of $441,311.78. This amount has been carried to Table 1 of this Report.

The actual receipts for 1919 were $3,959,930.32 as compared with estimated receipts of $3,819,042.66, an increase of $140,887.66. The actual charges were $4,610,134.02 as against estimated charges of $4,140,344.42, a difference of $469,789.60. The provisional balance was given as $770,213.72, whereas the actual balance was $441,311.78, a difference of $328,901.94. The increase of actual over estimated receipts is accounted for by the change in merit rating provisions for 1919, which change did not become effective until late in 1920. Legislation in 1920 increasing pensions retroactively largely accounts for the difference between actual and estimated charges, for, following the Board's usual practice, all additions to charges on account of accidents occurring prior to 1919 are included in the charges for 1919.

The following are the final financial figures for each year of operation of the Act, and the total to the end of 1919:

Year	Receipts.	Charges.
1915	$1,868,983 21	$1,211,967 33
1916	2,413,879 16	2,019,179 33
1917	2,832,208 25	2,851,556 51
1918	3,392,573 62	3,333,425 59
1919	3,959,930 32	4,610,134 02
Totals	$14,467,574 56	$14,026,262 78

Per Centum of Pay Roll Charged Employers

In order to determine the percentage of pay roll charged employers it is necessary to proportion receipts to pay roll. The resultant ratio will express the charge, which ratio includes any balance standing at the end of the particular year dealt with. The ratios for the various years since the inception of the Act, and the average rate over those years, are as follows:

Year	Total Pay Roll	Receipts.	Percentum Charged.
1915	$147,602,561 67	$1,868,983 21	.0127
1916	220,839,658 19	2,413,879 16	.0109
1917	286,902,695 73	2,832,208 25	.0099
1918	310,450,067 17	3,392,573 62	.0109
1919	325,225,970 37	3,959,930 32	.0122
All years	$1,291,020,953 13	$14,467,574 56	.0112

Deducting the balance forward at the end of 1919 of $441,311.78, the average cost rate of over the five years of operation was $1.09 for each $100 of pay roll.

Merit Rating Figures, 1919

The final financial figures for 1919 as shown in Table 14 include merit rating assessments of $238,132.00 and merit rating refunds of $157,673.49. Subsequent to January 1, 1921, on account of merit rating for 1919, employers were assessed $30,084.00 and were refunded $3,112.03. The total of merit rating assessments for 1919 was, therefore, $268,216.00, and of merit rating refunds, $160,785.52, an excess of assessments over refunds of $107,430.48.

Merit rating figures for 1917 (year of inception), 1918, and 1919 are compared and totalled as follows:

Year	Assessments	Refunds
1917	$99,322 88	$154,278 39
1918	139,887 41	253,286 92
1919	268,216 00	160,785 52
Totals	$507,426 29	$568,350 83

Final Accident Figures, 1919

The number of accidents occurring in 1919 for which compensation or medical aid has been paid is given in Table 15. The number in each class and for each category of disability is shown. The number of accidents in Schedule 1 industries for each of the five years of operation of the Act and the total number in which compensation or medical aid has been paid follows:

	Temporary Disability				
Year	Medical Aid only.	Compensation.	Permanent Disability.	Death.	Totals.
1915	....	7,783	1,237	219	9,239
1916	....	13,547	2,143	281	15,971
1917	*4,267	18,468	2,297	233	25,265
1918	12,822	20,349	2,303	239	35,713
1919	11,769	18,467	2,157	227	32,629
Totals	28,858	78,623	10,137	1,199	118,817

*Half year only.

Accident Frequencies

A basis of comparison of the frequency of accidents is to be found in correlating the number of accidents with the total number of full year workers. Eliminating accidents in which medical aid only was paid, the rates for each 100 full year workers for the different years are:

Year	Temporary Disability	Permanent Disability	Death	Totals
1915	3.63	.58	.12	4.32
1916	4.99	.79	.10	5.88
1917	5.78	.72	.07	6.57
1918	5.81	.66	.07	6.54
1919	5.81	.68	.07	6.56

The frequency rates for medical aid cases, on the same basis, are, for 1918, 3.66, and for 1919, 3.70.

Statistical Distributions

Tables 16 to 26 contain tabulations of the main statistical details of Schedule 1 accidents occurring in 1919. These tables follow the form of tables in prior reports and are designed to afford a maximum of information within a minimum of space.

Month of Occurrence

Table 16 gives the month of occurrence of accidents. The high month in 1919 was October, with 3,356, and the low month was April, with 2,118. In 1918 the high month was August, with 3,736 accidents, and the low month was February, with 2,517 accidents. In June, 1919, there were 31 fatalities, which is the high monthly record for the year, and in March there were 11 fatalities, which is the low monthly record. In 1918 the high and low months were April and January respectively. During 1919 there was a decline in the number of accidents for the first four months; then an almost continuous increase, month by month, till November, when there was a slight decrease, and December showing but 8 more accidents than November.

Accidents According to Locality

Table 17 shows the number of accidents which occurred in each county and district of the Province. In 1919, the high counties were York, Wentworth, Temiskaming, Welland, Essex, and Algoma, while in 1918 the order was York, Wentworth, Welland and Temiskaming (same number), Thunder Bay, Simcoe, and Algoma. There were, in 1919, 37 fatalities in York County and 33 in Algoma District, these being the two highest county records. In 1919, there were compensated 24 accidents occurring to Ontario workmen outside the Province, as compared with 16 in 1918.

Time Loss, Age, and Wage

Table 18 shows the average age and wage of the injured workers and the total and average time losses for each class. The total time loss, exclusive of cases in which medical aid only was paid, was 511,674 days in 1919, as compared with 573,653 days in 1918. This does not include loss of man power by death or permanent disability. The average time loss for accidents causing temporary disability was 19.66 days in 1919 as compared with 19.75 days in 1918; for permanent disabilities, 67.68 days in 1919 as against 73.95 days in 1918. The average weekly wage increased from $21.93 in 1918 to $22.26 in 1919, and the average age decreased from 34.93 years in 1918 to 34.47 years in 1919. The oldest worker injured in 1919 was 85 years of age and the youngest 10 years old. The number of injuries to minors and to persons of advanced age is shown to have been as follows:

Age	Temporary Disability	Permanent Disability	Death	Totals
10	1			1
11				
12	2		1	3
13	1	2		3
14	159	29		188
15	351	50	1	402
16	541	85	3	629
17	561	68	3	632
18	661	73	8	742
19	618	75	3	696
20	525	59	3	587
Totals	3,420	441	22	3,883
70	43	6		49
71	14	3		17
72	17	3		20
73	12	3		15
74	20	1		21
75	17	2	1	20
76	7	2		9
77	4	1		5
78	5	1		6
79	3			3
80	2			2
81	1			1
82				
83				
84				
85	1			1
Totals	146	22	1	169

Compensation and Medical Aid Costs

Table 19 gives total and average cost of compensation and medical aid by classes for each category of disability, according to the nature of the benefit.

The average cost of all accidents in which compensation was paid was $163.99, of which amount $144.14 was for compensation and $19.85 for medical aid. The average cost for 1918 was $135.80, of which $121.71 was for compensation and $14.09 for medical aid. The increase is due largely to increased death pensions and increased medical aid benefits.

The average cost of temporary disability accidents was $55.01, of which $39.48 was for compensation and $15.53 for medical aid, as compared with an average cost of $47.21 in 1918, of which amount $35.70 was for compensation and $11.51 for medical aid.

Permanent disabilities cost on the average $722.94, of which $667.68 was for compensation and $55.26 was for medical aid, as against $708.87, $673.06, and $35.81, respectively, in 1918.

The average cost of death cases, including cases where no award was made on account of dependency, was $3.727.59, the average compensation for temporary disability in death cases being $23.19, the average funeral expenses $72.50, the average medical aid $35.06, and the average death benefits being $5,301.84 for cases of dependancy. The average award in death cases where award was made was $5,432.59 in 1919, as compared with $3,092.37 in 1918.

In all, $3,007,733.46 was paid for compensation for accidents occurring in 1919 and $463,836.78 for medical aid. Of the amount paid in compensation $729,354.26 was on account of temporary disability, $1,440,173.81 on account of permanent disability, and $838,205.39 on account of death. The $463,836.78 paid in medical aid was divided, $49,777.88 in medical aid only cases, $286,896.43 in temporary disability cases, $119,204.92 in permanent disability cases, and $7,957.55 in death cases. For 1918 the figures were: all compensation, $2,786,142.34; for temporary disability cases, $726,465.43; for permanent disability cases, $1.550.068.95; for death cases, $509.607.96: all medical aid cases, $368,527.73; for medical aid only cases, $46.023.75; for temporary disability cases, $234,294.20; for permanent disability cases, $82,468.03; and for death cases $5,741.75.

Allegiance of Injured

Table 20 gives the allegiance of the injured as taken from their own reports. There were 17102 of British allegiance and 3,758 of non-British allegiance, as compared with 17,343 of British allegiance and 5.548 of foreign allegiance in 1918. In 1919 there were injured 1.136 Austrians, 840 Russians, 821 Italians, 352 Americans, 125 Bulgarians, and 100 Roumanians. There were 32 of German allegiance, as compared with 27 in 1918. Among the allegiances represented were Albanian, Japanese, Mexican, Montenegran, and Swiss.

Sex and Marital Condition of Injured

Table 21 contains the sex and marital condition of injured workers. There were 699 females injured in 1919, as compared with 1,209 in 1918. Of the 699 females, 603 were single, 73 married, and 23 widowed. There were 611 temporarily disabled and 88 permanently impaired. Of the 20,161 males injured, 11,551 were married and 344 widowers.

Duration of Disability

The week of termination of temporary disabilities is shown in Table 22. Of a total of 18,476 cases, in 8.629 cases, or 46.76 per cent. of cases, the disability terminated in from one to two weeks; in 3,762 cases, or 20.36 per cent. of cases, in from two to three weeks. In 1918 in 47.30 per cent. of cases the disability terminated in from one to two weeks after the accident, and in 20.57 per cent. of cases in from two to three weeks. In 1919 in 8 cases the disability did not terminate within a year, there being the same number in 1918.

Nature of Injuries

Table 23 is divided into three parts; the first gives the nature of injuries in temporary disability cases by classes; the second, the per cent. impairment (groups of ten per cent.) by region of body impaired in permanent disability cases; and the third part contains particulars of industrial disease cases classified by the nature of the disease.

During 1919, as in former years, cuts, lacerations, and punctures was the most common type of wound in temporary disability cases, there being 6,922 of these. There were 4,254 bruises, contusions, and abrasions, 1,647 fractures, 1,982 crushes, 1,385 sprains, strains, twistings, and wrenchings, 1,205 burns and scalds, 661 eye injuries, 49 herniae, 13 internal injuries, 43 concussions, 131 dislocations, 14 industrial diseases, and 170 of all other types of injury.

Of the 2,157 cases of permanent injury, there were 308 cases of disability exceeding ten per cent. of total earning capacity, as compared with 317 in 1918. There were altogether 169 cases of eye injury, and the hand, thumb and finger injuries numbered 1,483. There were 6 cases of disfigurement, 85 cases of damage to teeth, and 6 cases of impairment of hearing, for which an award for permanent disability was made. There were 12 cases of permanent total disability in 1919 as compared with 28 in 1918 and 14 in 1917. The 12 cases of permanent total disability divide: loss of one leg and one arm, 1; injury to back or head, resulting in total or partial paralysis, 4; loss of eyesight, 1; loss of both hands, 1; loss of both arms, 3; all other, 2.

There were no deaths reported from industrial diseases in 1919, but there were 12 cases of lead poisoning or its sequelae; 1 case each of anthrax and miners' phthisis; all of which occasioned temporary disability only. In 1918 there were 3 deaths and 10 cases of temporary disability comprising the roll for industrial diseases.

Causes of Accidents

Table 24 shows the classification of accidents according to prime cause. Mechanical causes in 1919 were responsible for 32.75 per cent. of all accidents, as compared with 35.92 per cent. in 1918, and 31.70 per cent. in 1917.

Blood Poisoning Cases

Table 25 gives the number of cases in which the seriousness of the accident was due to concurrent or subsequent infection rather than to the agency causing the injury. The relative frequency of such cases in 1919 was 6.77 per cent. of cases; in 1918, 6.67 per cent.; and in 1917, 6.2 per cent. During 1919 blood poisoning caused 12 deaths, 9 amputations, and 27 cases of immobilized joints, as compared with 8 deaths, 22 amputations, and 27 cases of immobilized joints in 1918.

Death Cases

Table 26 shows the nature of awards, the number, relationship, and residence of dependants, as well as the time between injury and death.

TABLE 14

FINANCIAL STATEMENT FOR 1919, SCHEDULE 1 BY CLASSES

Class	Net Receipts	Net Charges	Balance for 1919	Balance forward from 1918	Balance at Dec. 31, 1920	Class
	$ c.	$ c.	$ c.	$ c.	$ c.	
1	513,878 77	522,828 86	—8,950 09	11,800 86	2,850 77	1
2	169,497 77	234,516 14	—65,018 37	—1,689 41	—66,707 78	2
3	101,053 46	95,090 64	5,962 82	36,006 38	41,969 20	3
4	210,822 55	204,859 88	5,962 67	5,738 84	11,701 51	4
5	316,248 76	395,153 97	—78,905 21	83,087 68	4,182 47	5
6	108,827 85	144,510 66	—35,682 81	30,403 01	—5,279 80	6
7	24,795 59	20,366 38	4,429 21	6,568 98	10,998 19	7
8a	236,801 35	278,599 10	—41,797 75	45,302 50	3,504 75	8a
8b	106,314 12	117,530 55	—11,216 43	21,733 13	10,516 70	8b
8c	313,231 65	344,948 14	—31,716 49	19,434 04	—12,282 45	8c
10	269,839 53	356,856 63	—87,017 10	166,163 22	79,146 12	10
11	259,324 12	270,126 84	—10,802 72	44,409 97	33,607 25	11
12	7,164 76	12,665 92	—5,501 16	10,747 88	5,246 72	12
13	—57,374 42	26,989 59	—84,364 01	116,878 92	32,514 91	13
14	106,191 76	120,028 83	—13,837 07	26,288 60	12,451 53	14
15	29,947 94	35,544 00	—5,596 06	—11,490 81	—17,086 87	15
16	13,982 34	19,026 70	—5,044 36	3,046 14	—1,998 22	16
17	80,342 30	139,004 38	—58,662 08	5,150 47	—53,511 61	17
18	58,221 23	63,768 21	—5,546 98	20,443 42	14,896 44	18
19	33,863 15	32,853 48	1,009 67	1,051 23	2,060 90	19
20	124,960 70	107,992 08	16,968 62	10,882 77	27,851 39	20
22	138,400 12	144,003 31	—5,603 19	5,884 16	280 97	22
24	1,734 01	2,202 51	—468 50	5,624 11	5,155 61	24
26	113,602 96	116,526 39	—2,923 43	7,787 24	4,863 81	26
27	11,555 18	13,808 61	—2,253 43	13,497 15	11,243 72	27
28	7,412 02	11,493 63	—4,081 61	11,926 42	7,844 81	28
29	54,914 27	60,897 53	—5,983 26	22,928 60	16,945 34	29
30	43,434 32	49,620 29	—6,185 97	20,735 44	14,549 47	30
32	29,901 75	34,949 09	—5,047 34	34,174 47	29,127 13	32
33	337,611 64	403,742 11	—66,130 47	192,080 53	125,950 06	33
37	50,436 55	53,448 34	—3,011 79	44,222 05	41,210 26	37
38	28,628 05	48,506 10	—19,878 05	26,534 26	6,656 21	38
41	114,355 88	127,675 13	—13,319 25	54,037 24	40,717 99	41
73	8 29	....	8 29	125 99	134 28	73
	4,017,304 74	4,610,134 02	—684,544 98	1,104,695 70	598,178 51	
	—57,374 42		34,341 28	—13,180 22	—156,866 73	
	3,959, 930 32		—650,203 70	1,091,515 48	441,311 78	

These totals include merit rating assessments and refunds as follows:

Assessments....................................	$238,132 00
Refunds..	157,673 49

Subsequently there was assessed or refunded on account of merit rating, 1919, the following amounts:

Assessments....................................	$30,084 00
Refunds..	3,112 03

The totals for 1919 merit rating, therefore, were:

Assessments....................................	$268,216 00
Refunds..	160,785 52
	$107,430 48

TABLE 15

NUMBER OF ACCIDENTS IN 1919, SCHEDULE 1 BY CLASSES

Class	Temporary Disability		Permanent Disability	Death	Totals	Class
	Medical Aid only	Compensation				
1	338	1,838	183	46	2,405	1
2	636	855	72	13	1,576	2
3	213	514	130	2	859	3
4	260	813	167	11	1,251	4
5	1,345	1,488	114	37	2,984	5
6	112	342	42	7	503	6
7	64	132	14	1	211	7
8a	330	957	68	19	1,374	8a
8b	462	776	56	2	1,296	8b
8c	2,294	1,674	180	10	4,158	8c
10	1,591	1,496	304	4	3,395	10
11	1,427	1,560	167	6	3,160	11
12	27	40	13		80	12
13		6	1		7	13
14	247	486	46	5	784	14
15	52	96	5	3	156	15
16	58	64	12		134	16
17	73	242	28	5	348	17
18	280	513	36	1	830	18
19	42	150	16		208	19
20	330	627	60	4	1,021	20
22	292	683	88	6	1,069	22
24	1	15	2		18	24
26	295	553	63	6	917	26
27	134	147	8		289	27
28	6	29	11		46	28
29	167	312	71		550	29
30	28	247	15	2	292	30
32	37	58	8	2	105	32
33	480	1,296	124	16	1,916	33
37	46	164	16	5	231	37
38	13	52	4	2	71	38
41	89	251	33	12	385	41
73						73
Totals	11,769	18,476	2,157	227	32,629	Totals

TABLE 16

MONTH OF OCCURRENCE OF ACCIDENTS, 1919, SCHEDULE 1

Month of Occurrence	Temporary Disability		Permanent Disability	Death	Totals
	Medical Aid only	Compensation			
January	807	1,475	170	23	2,475
February	741	1,399	154	26	2,320
March	829	1,381	149	11	2,370
April	759	1,208	129	22	2,118
May	819	1,382	164	16	2,381
June	992	1,518	170	31	2,711
July	971	1,416	181	15	2,583
August	1,091	1,490	173	15	2,769
September	1,127	1,671	195	17	3,010
October	1,316	1,774	250	16	3,356
November	1,247	1,801	201	15	3,264
December	1,070	1,961	221	20	3,272
Totals	11,769	18,476	2,157	227	32,629

TABLE 17

LOCALITY OF ACCIDENTS, 1919, SCHEDULE 1

County or District	Temporary Disability		Permanent Disability	Death	Totals
	Medical Aid, only.	Compensation.			
Algoma	441	1,007	61	33	1,542
Brant	394	567	71	6	1,038
Bruce	16	119	17	....	152
Carleton	132	389	44	5	570
Dufferin	2	4	....	....	6
Dundas	17	19	10	....	46
Durham	25	67	5	....	97
Elgin	35	111	19	....	165
Essex	878	651	90	3	1,622
Frontenac	223	144	25	1	393
Glengarry	6	9	2	....	17
Grenville	16	19	3	....	38
Grey	128	220	48	2	398
Haldimand	42	50	6	1	99
Haliburton	4	50	3	....	57
Halton	44	121	13	....	178
Hastings	65	231	29	7	332
Huron	27	105	16	2	150
Kenora	29	91	13	3	136
Kent	180	279	26	4	489
Lambton	121	237	27	3	388
Lanark	51	114	11	1	177
Leeds	124	105	9	....	238
Lennox and Addington	9	20	3	....	32
Lincoln	204	330	37	7	578
Manitoulin	2	12	2	....	16
Middlesex	136	431	61	4	632
Muskoka	7	85	9	2	103
Nipissing	59	282	25	7	373
Norfolk	12	53	7	3	75
Northumberland	6	37	10	....	53
Ontario	186	325	26	....	537
Oxford	73	214	37	1	325
Parry Sound	21	233	12	4	270
Patricia	....	....	....	....	....
Peel	18	45	6	1	70
Perth	65	192	24	3	284
Peterborough	157	216	25	1	399
Prescott	52	86	10	....	148
Prince Edward	3	14	1	....	18
Rainy River	24	100	14	5	143
Renfrew	91	254	33	1	379
Russell	28	55	8	1	92
Simcoe	626	520	52	9	1,207
Stormont	39	120	16	1	176
Sudbury	123	626	41	24	814
Temiskaming	1,193	1,001	73	20	2,287
Thunder Bay	691	471	47	6	1,215
Victoria	8	57	7	....	72
Waterloo	396	743	115	5	1,259
Welland	805	795	83	8	1,691
Wellington	136	296	27	....	459
Wentworth	1,040	1,935	249	5	3,229
York	2,556	4,199	549	37	7,341
Not in Ontario	3	20	....	1	24
Totals	11,769	18,476	2,157	227	32,629

TABLE 18

TIME LOSS, AVERAGE AGE, AND AVERAGE WAGE, 1919, SCHEDULE 1 BY CLASSES

	TIME LOSS*						AGE	WAGE
	Temporary Disability		Permanent Disability		Death Cases		All Cases	All Cases
Class	Total Days	Average Days	Total Days	Average Days	Total Days	Average Days	Average Age (Years)	Average Weekly Wage
								$ c.
1	50,359	27.40	16,196	88.50	162	03.52	34.48	21.42
2	15,772	18.45	5,122	71.14	109	08.38	32.75	24.73
3	8,781	17.08	5,275	40.58	0	0	36.16	17.09
4	15,498	19.06	10,342	61.93	304	27.64	36.40	17.97
5	27,503	18.48	8,174	71.70	270	07.30	33.79	26.21
6	7,483	21.88	3,081	73.36	6	00.86	37.07	22.63
7	2,157	16.34	927	66.21	0	0	32.18	21.40
8a	18,930	19.78	5,776	84.94	1,026	54.00	35.41	28.71
8b	15,139	19.51	3,093	55.23	11	05.50	35.88	23.08
8c	31,255	18.67	12,867	71.48	41	04.10	35.68	23.13
10	23,092	15.44	17,182	56.52	114	28.50	31.54	19.61
11	26,436	16.95	8,332	49.89	250	41.67	35.29	22.34
12	543	13.58	735	56.54	....	....	25.29	17.65
13	121	20.17	1,658	1,658.00	....	....	31.07	20.50
14	8,590	17.67	2,719	59.11	0	0	36.39	22.64
15	1,808	18.83	585	117.00	15	05.00	33.96	19.69
16	1,014	15.84	445	37.08	....	....	32.21	18.82
17	5,072	20.96	2,022	72.21	0	0	38.16	22.81
18	8,831	17.21	2,436	67.67	0	0	32.42	22.42
19	2,730	18.20	890	55.63	....	....	37.36	20.57
20	10,578	16.87	3,215	53.58	0	0	30.86	20.18
22	13,860	20.29	5,751	65.35	6	01.00	32.82	19.81
24	304	20.27	224	112.00	....	....	33.85	16.03
26	10,595	19.16	4,073	64.65	10	01.67	31.33	16.57
27	2,382	16.20	359	44.88	....	....	27.99	16.89
28	677	23.34	1,058	96.18	....	....	32.71	16.55
29	5,918	18.97	3,074	43.30	....	....	26.32	15.67
30	6,285	25.45	1,964	130.93	0	0	37.99	20.40
32	1,497	25.81	1,045	130.63	35	17.50	35.93	30.41
33	28,824	22.24	13,050	105.24	31	01.94	37.27	25.74
37	4,332	26.41	1,734	108.38	0	0	38.28	24.96
38	1,181	22.71	183	45.75	0	0	42.69	26.16
41	5,625	22.41	2,395	72.58	130	10.83	36.35	27.40
73	....	....	....	....	....	....	....	....
All	363,172	19.66	145,982	67.68	2,520	11.10	34.47	22.26

*This does not include loss of man power by permanent impairment or death.

TABLE 19—TOTAL AND AVERAGE COMPENSATION AND MEDICAL AID COSTS, 1919, SCHEDULE 1 BY CLASSES

Compensation Costs

Class	Temporary Disability Cases		Permanent Disability Cases				Death Cases						All Cases	
	For Temporary Disability		For Temporary Disability		For Permanent Disability		For Temporary Disability		For Death Benefits		For Funeral Expenses			
	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1	97,862 51	53 24	29,876 80	163 26	128,646 30	702 99	328 99	7 15	109,924 62	2,389 67	3,172 15	68 96	369,811 37	178 91
2	31,734 39	37 12	11,201 39	155 57	60,651 38	842 38	303 64	23 36	57,848 63	4,449 89	970 00	74 62	162,709 43	173 10
3	13,158 34	25 60	8,615 69	66 27	43,688 27	336 06	0	0	12,507 63	6,253 82	150 00	75 00	78,119 93	120 93
4	13,239 05	16 28	16,013 82	95 89	86,089 02	515 50	630 26	57 30	28,637 82	2,603 44	825 00	75 00	145,434 97	146 76
5	52,452 34	35 23	18,447 95	161 82	55,314 80	485 22	561 13	161 82	86,074 62	2,326 34	2,752 75	74 40	215,603 59	131 55
6	19,671 13	57 52	6,687 02	159 21	33,162 02	789 57	9 94	1 42	38,852 91	5,550 42	525 00	75 00	98,908 02	252 96
7	4,429 28	33 56	1,744 88	124 63	8,913 78	636 70	0	0	0	0	0	0	15,087 94	102 64
8a	40,401 16	42 22	13,763 77	202 41	43,085 75	633 61	1,945 60	102 40	78,611 89	4,137 47	1,422 50	74 87	179,230 67	171 68
8b	31,609 53	40 73	5,638 72	100 69	23,140 02	413 21	8 66	4 33	17,316 89	8,658 45	150 00	75 00	77,863 82	93 36
8c	72,006 59	43 01	27,280 29	151 56	90,432 64	502 40	81 53	8 15	46,469 02	4,646 90	675 00	67 50	236,945 07	127 12
0	45,226 79	30 23	31,319 50	103 02	156,332 89	514 25	152 79	38 20	18,636 87	4,659 22	300 00	75 00	251,968 84	139 67
1	53,425 09	34 25	15,624 11	93 56	68,585 76	410 69	669 65	111 61	42,615 48	7,102 58	450 00	75 00	181,370 09	104 66
2	774 08	19 35	1,120 78	86 21	9,196 00	707 38	....	....	....	....	....	....	11,090 86	209 26
3	174 57	29 10	2,344 33	2,344 33	9,077 00	9,077 00	....	....	....	....	....	....	11,595 90	1,656 56
4	18,629 03	38 33	5,177 37	112 55	13,254 59	288 14	0	0	29,223 14	5,844 63	375 00	75 00	66,659 13	124 13
5	3,214 32	33 48	914 67	182 93	1,300 00	260 00	23 45	7 82	4,982 17	1,660 72	225 00	75 00	10,659 61	102 50
6	1,633 42	25 52	758 13	63 18	11,421 31	951 78	....	....	....	....	....	....	13,812 86	181 75
7	10,253 76	42 37	3,413 04	121 89	15,913 05	568 32	0	0	23,010 49	4,602 10	375 00	75 00	52,965 34	192 60
8	12,638 95	24 64	4,518 75	125 52	21,722 13	603 39	0	0	7,738 10	7,738 10	75 00	75 00	46,692 93	84 90
9	8,122 90	54 15	1,494 19	93 39	4,676 00	292 25	....	....	....	....	....	....	14,293 09	86 10
0	23,365 47	37 24	5,632 03	93 87	40,444 47	674 07	0	0	21,374 91	5,343 73	225 00	56 25	91,041 88	131 75
2	25,471 88	37 29	8,965 64	101 88	46,701 82	530 70	12 36	2 06	14,036 90	2,339 48	450 00	75 00	95,638 60	123 09
4	409 72	27 31	359 80	179 90	830 00	415 00	....	....	....	....	....	....	1,599 52	94 09
6	15,319 69	27 70	5,788 00	91 87	24,877 55	394 88	12 55	2 09	35,185 52	5,864 25	450 00	75 00	81,633 31	131 24
7	4,222 53	28 72	455 09	56 89	2,530 00	316 25	....	....	....	....	....	....	7,207 62	46 50
8	1,009 58	34 81	1,092 52	99 32	7,988 64	726 24	....	....	....	....	....	....	10,090 74	252 27
9	7,817 33	25 06	4,914 73	69 22	25,689 76	364 36	....	....	....	....	....	....	38,421 82	100 32
0	12,050 99	48 79	3,124 10	208 27	8,163 00	544 20	0	0	6,647 98	3,323 99	150 00	75 00	30,136 07	114 15
2	3,235 67	55 79	2,586 49	323 31	10,156 00	1,269 50	80 36	40 18	9,359 03	4,679 52	150 00	75 00	25,567 55	375 99
3	69,416 26	53 56	28,494 32	21 99	80,041 80	645 50	75 29	4 76	79,418 27	4,963 64	1,164 80	72 80	258,610 74	180 09
7	15,763 39	96 12	3,839 98	240 00	13,472 14	842 01	0	0	2,485 82	497 16	375 00	75 00	35,936 33	194 25
8	5,235 31	100 68	477 22	119 31	4,458 00	1,114 50	0	0	7,359 16	3,679 58	150 00	75 00	17,679 69	304 82
1	15,379 21	61 27	5,996 80	181 72	12,536 00	379 88	368 87	30 74	38,165 25	3,180 44	900 00	75 00	73,346 13	247 79
3	....	....	....	....	....	....	....	....	....	....	....	....	....	....
All	729,354 26	39 48	277,681 92	128 74	1,162,491 89	538 94	5,265 07	23 19	816,483 12	3,596 84	16,457 20	72 50	3,007,733 46	144 14

TABLE 19—Continued

Medical Aid Costs

Class	When Medical Aid Only		In Temporary Disability Cases		In Permanent Disability Cases		In Death Cases		For All Cases	
	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1	4,164 00	12 32	53,259 55	28 98	15,141 92	82 74	1,488 60	32 36	74,054 07	30 79
2	3,241 65	5 10	14,828 90	17 34	4,245 05	58 96	671 70	5 17	22,987 30	14 59
3	1,072 10	5 03	5,477 05	10 66	4,144 15	31 88	66 50	33 25	10,759 80	12 53
4	1,383 85	5 32	9,379 80	11 54	6,747 05	40 40	1,245 85	113 26	18,756 55	14 99
5	4,814 90	3 58	21,865 38	14 69	7,190 77	63 08	853 10	23 06	34,724 15	11 64
6	584 90	5 22	5,108 60	14 94	2,387 45	56 84	153 75	21 96	8,234 70	16 37
7	295 40	4 62	1,403 20	10 63	700 25	50 02	3 00	3 00	2,401 85	11 38
8a	1,469 80	4 45	16,341 45	17 08	4,610 60	67 80	200 10	10 53	22,621 95	16 46
8b	1,565 25	3 39	10,914 75	14 07	3,487 85	62 28	41 00	20 50	16,008 85	12 35
8c	6,950 30	3 03	24,328 00	14 53	11,149 85	61 94	732 35	73 24	43,160 50	10 38
10	6,115 35	3 84	15,491 50	10 36	12,038 30	39 60	222 50	55 63	33,867 65	9 98
11	5,447 00	3 82	18,387 50	11 79	7,332 05	43 90	587 85	97 98	31,754 40	10 05
12	90 90	3 37	414 30	10 36	915 50	70 42	....	....	1,420 70	17 76
13	....	....	65 80	10 97	0	0	....	....	65 80	9 40
14	1,205 50	4 88	7,910 45	16 28	2,159 60	46 95	50 00	10 00	11,325 55	14 45
15	248 90	4 79	1,671 85	17 42	538 50	107 70	215 50	71 83	2,674 75	17 15
16	270 50	4 66	593 35	9 27	729 70	60 81	....	....	1,593 55	11 89
17	339 95	4 66	4,058 30	16 77	1,773 15	63 33	94 25	18 85	6,265 65	18 00
18	1,231 70	4 40	5,584 50	10 89	1,787 45	49 65	63 50	63 50	8,667 15	10 44
19	155 45	3 70	2,546 00	16 97	443 50	27 72	....	....	3,144 95	15 12
20	1,294 30	3 92	5,733 10	9 14	2,984 68	49 74	16 50	4 13	10,028 58	9 82
22	1,380 20	4 73	8,384 40	12 28	4,296 40	48 82	152 00	25 33	14,213 00	13 29
24	3 00	3 00	158 45	10 56	414 50	207 25	....	....	575 95	32 00
26	1,431 25	4 85	7,940 60	14 36	3,637 50	57 74	75 25	12 54	13,084 60	14 27
27	578 35	4 32	2,230 85	15 18	414 30	51 79	....	....	3,223 50	11 15
28	30 10	5 02	394 10	13 59	799 45	72 68	... ...	....	1,223 65	26 60
29	818 75	4 90	4,279 55	13 72	2,876 25	40 51	....	....	7,974 55	14 50
30	140 30	5 01	4,386 80	17 76	1,433 95	95 60	45 00	22 50	6,006 05	20 57
32	132 60	3 58	866 45	14 94	625 30	78 16	149 50	74 75	1,773 85	16 89
33	2,473 63	5 15	21,753 30	16 78	9,673 95	78 01	538 15	33 63	34,439 03	17 97
37	287 70	6 25	3,577 20	21 81	2,012 60	125 79	56 00	11 20	5,933 50	25 67
38	74 10	5 70	3,117 80	59 96	117 40	29 35	3 00	1 50	3,312 30	46 65
41	486 20	5 46	4,443 60	17 70	2,395 95	72 60	232 60	19 38	7,558 35	19 63
73	....	....	....	....	....	....	....	....	....	....
All	49,777 88	4 23	286,896 43	15 53	119,204 92	55 26	7,957 55	35 06	463,836 78	14 22

TABLE 20

ALLEGIANCE OF INJURED WORKERS, 1919, SCHEDULE 1

Allegiance to	Temporary Disability	Permanent Disability	Death	Totals
Albania	3	...	...	3
Austria	1,043	82	11	1,136
Belgium	8	1	...	9
Bulgaria	109	14	2	125
China	14	3	1	18
Denmark	7	1	...	8
France	65	7	3	75
Germany	31	1	...	32
Great Britain	15,048	1,880	174	17,102
Greece	40	2	...	42
Holland	3	1	...	4
Italy	767	44	10	821
Japan	1	...	...	1
Mexico	3	1	...	4
Montenegro	1	...	...	1
Norway	16	...	1	17
Persia	1	...	...	1
Roumania	86	14	...	100
Russia	769	55	16	840
Serbia	34	3	...	37
Spain	11	...	...	11
Sweden	48	5	3	56
Switzerland	1	...	...	1
Turkey	57	7	...	64
United States	310	36	6	352
Totals	18,476	2,157	227	20,860

TABLE 21

SEX AND MARITAL CONDITION OF INJURED WORKERS, 1919 SCHEDULE 1

Sex and Marital Condition	Temporary Disability	Permanent Disability	Death	Totals
Males—				
Married	10,207	1,221	123	11,551
Single	7,012	771	63	7,846
Widowed	286	51	7	344
Not specified	360	26	34	420
Totals	17,865	2,069	227	20,161
Females—				
Married	61	12	...	73
Single	530	73	...	603
Widowed	20	3	...	23
Not specified	...	...	...	...
Totals	611	88	...	699
Grand Totals	18,476	2,157	227	20,860

TABLE 22

WEEK OF TERMINATION OF TEMPORARY DISABILITIES, 1919, SCHEDULE 1

In	8,629	cases	the disability	terminated in	1	to	2	weeks	after the accident.
"	3,762	"	"	"	2	"	3	"	"
"	2,093	"	"	"	3	"	4	"	"
"	1,255	"	"	"	4	"	5	"	"
"	816	"	"	"	5	"	6	"	"
"	511	"	"	"	6	"	7	"	"
"	372	"	"	"	7	"	8	"	"
"	219	"	"	"	8	"	9	"	"
"	186	"	"	"	9	"	10	"	"
"	113	"	"	"	10	"	11	"	"
"	81	"	"	"	11	"	12	"	"
"	56	"	"	"	12	"	13	"	"
"	55	"	"	"	13	"	14	"	"
"	60	"	"	"	14	"	15	"	"
"	51	"	"	"	15	"	16	"	"
"	33	"	"	"	16	"	17	"	"
"	28	"	"	"	17	"	18	"	"
"	22	"	"	"	18	"	19	"	"
"	22	"	"	"	19	"	20	"	"
"	15	"	"	"	20	"	21	"	"
"	12	"	"	"	21	"	22	"	"
"	5	"	"	"	22	"	23	"	"
"	12	"	"	"	23	"	24	"	"
"	5	"	"	"	24	"	25	"	"
"	13	"	"	"	25	"	26	"	"
"	3	"	"	"	26	"	27	"	"
"	5	"	"	"	27	"	28	"	"
"	4	"	"	"	28	"	29	"	"
"	3	"	"	"	29	"	30	"	"
"	1	"	"	"	30	"	31	"	"
"	4	"	"	"	31	"	32	"	"
"	4	"	"	"	32	"	33	"	"
"	1	"	"	"	33	"	34	"	"
"	1	"	"	"	34	"	35	"	"
"	2	"	"	"	36	"	37	"	"
"	2	"	"	"	37	"	38	"	"
"	12	"	"	"	39	"	52	"	"
"	8	"	"	did not terminate in 52 weeks.					
	18,476	Total Cases							

TABLE 23

NATURE OF INJURIES, 1919, SCHEDULE 1 BY CLASSES

Temporary Disability Cases

Class	Bruises, Contusions and Abrasions	Cuts, Lacerations and Punctures	Fractures	Crushes	Sprains, Strains, Twistings and Wrenchings	Burns and Scalds	Eye Injuries	Herniae	Internal Injuries	Concussions (Brain, Spine, etc.)	Dislocations	All other Injuries	Industrial Diseases (Schedule 3)	Totals
1	487	749	290	108	93	34	30	7	1	3	22	14	....	1,838
2	226	330	60	118	61	34	9	2	....	5	3	7	....	855
3	67	332	38	32	15	13	7	2	....	....	1	7	....	514
4	163	406	68	85	45	17	18	....	....	2	4	3	2	813
5	433	397	99	180	129	118	93	6	....	3	10	19	1	1,488
6	103	79	41	41	27	19	17	1	....	....	7	7	....	342
7	20	73	8	3	9	16	2	....	....	....	....	1	....	132
8a	295	251	62	127	62	110	40	....	1	1	3	5	....	957
8b	133	166	39	93	48	236	50	6	....	....	2	2	1	776
8c	400	527	131	257	130	82	116	5	3	4	6	11	2	1,674
10	222	725	68	220	67	98	77	1	....	....	8	9	1	1,496
11	337	614	111	132	120	122	90	2	1	4	13	11	3	1,560
12	4	24	1	8	......	2	....	....	....	....	....	1	....	40
13	2	1	1	......	......	......	1	....	....	....	....	1	....	6
14	125	127	56	44	53	43	20	2	....	3	2	9	2	486
15	13	43	14	6	9	5	5	....	....	1	....	....	....	96
16	9	25	2	8	3	11	4	....	....	....	....	2	....	64
17	55	83	33	21	27	8	2	1	....	3	5	4	....	242
18	82	290	40	22	30	39	3	....	....	1	2	3	1	513
19	30	63	7	16	17	9	2	1	....	....	2	3	....	150
20	137	244	40	94	53	23	17	....	4	....	2	12	1	627
22	150	277	64	53	66	53	6	....	....	1	5	8	....	683
24	4	6	......	1	3	1	....	....	....	....	....	....	....	15
26	92	267	50	62	38	23	8	1	1	1	3	7	....	553
27	25	93	7	5	8	6	2	....	....	....	....	1	....	147
28	2	7	3	3	3	9	....	....	....	....	1	1	....	29
29	52	128	24	75	13	11	1	3	....	1	4	....	....	312
30	75	51	39	28	38	1	4	3	1	2	5	....	....	247
32	13	17	12	8	4	......	3	....	....	....	....	1	....	58
33	359	403	177	82	164	47	24	5	1	7	15	12	....	1,296
37	52	38	21	24	18	5	2	....	....	....	2	2	....	164
38	10	14	8	5	3	4	3	....	....	1	2	2	....	52
41	77	72	33	21	29	6	5	1	....	....	2	5	....	251
73	......	......	......	......	......	......	....	....	....	....	....	....	....	....
All	4,254	6,922	1,647	1,982	1,385	1,205	661	49	13	43	131	170	14	18,476

TABLE 23.—Continued

Permanent Disability Cases

Per Cent. Impairment of Total Earning Capacity.

Part of Body Affected.	0.0–9.9.	10.0-19.9	20.0-29.9	30.0-39.9	40.0-49.9	50.0-59.9	60.0-69.9	70.0-79.9	80.0-89.9	90.0-99.9	100.	Totals
One or more toes.......	45	1	....	....	....	....	....	....	....	....	....	46
Foot..................	74	4	3	....	....	....	....	....	....	....	....	81
Leg...................	82	2	7	7	3	1	1	2	2	....	1	108
Back..................	13	1	3	....	....	....	....	....	....	....	2	19
Head..................	7	1	2	....	....	1	....	1	....	....	2	14
Eye...................	50	114	2	....	....	1	....	1	....	....	1	169
Ear...................	6	....	....	....	....	....	....	....	....	....	....	6
Teeth.................	85	....	....	....	....	....	....	....	....	....	....	85
Arm...................	85	9	5	9	3	8	4	1	....	....	3	127
Hand..................	59	16	30	18	1	1	....	1	....	....	1	127
Thumb and 1 finger.....	20	5	....	....	....	....	....	....	....	....	....	25
Thumb and 2 fingers.....	6	2	3	....	....	....	....	....	....	....	....	11
Thumb and 3 fingers.....	3	1	1	....	....	....	....	....	....	....	....	5
Thumb and 4 fingers.....	......	......	....	....	....	....	....	....	....	....	....	....
Thumb.................	167	....	....	....	....	....	....	....	....	....	....	167
One finger.............	887	....	....	....	....	....	....	....	....	....	....	887
Two fingers............	167	3	....	....	....	....	....	....	....	....	....	170
Three fingers...........	66	1	....	....	....	....	....	....	....	....	....	67
Four fingers...........	11	11	1	1	....	....	....	....	....	....	....	24
Disfigurement..........	6	....	....	....	....	....	....	....	....	....	....	6
All other..............	10	....	1	....	....	....	....	....	....	....	2	13
Totals.........	1,849	171	58	35	7	12	5	6	2	....	12	2,157

Industrial Diseases

Description of Disease.	Temporary Disability	Permanent Disability	Death	Totals
Anthrax.....................	1	....	....	1
Lead poisoning or its sequelæ.........	12	....	....	12
Miners' phthisis....................	1	....	....	1
Totals.....................	14	....	....	14

TABLE 24

CAUSES OF ACCIDENTS, 1919, SCHEDULE 1

Cause	Temp. Dis.		Perm. Dis.	Death	Totals
	Med. Aid Only	Compensation			
A. Prime Movers:					
1. Motors, engines, fans, pumps, and automatic stokers	44	84	24	4	156
2. Shafting, coupling, collars, set screws, and keys	20	36	7	5	68
3. Belts, lines, pulleys, chains and sprockets	123	251	39	3	416
4. Gears, cogs, cams, and friction wheels	37	66	28	2	133
Totals	224	437	98	14	773
B. Working Machines:					
1. Brick-making machines	1	7	2	....	10
2. Cement-making machines	....	1	....	....	1
3. Glass-making machines	2	4	2	....	8
4. Stone-working machines	....	1	3	....	4
5. Mining machines, n. e. s.	13	4	5	....	22
6. Mine drills	125	98	7	1	231
7. Contracting machines	16	48	6	....	70
8. Metal-working machines, n. e. s.	331	452	88	2	873
9. Abrasive wheels	1,289	293	35	2	1,619
10. Lathes	233	161	19	....	413
11. Pneumatic tools	833	232	33	....	1,098
12. Presses	245	415	250	....	910
13. Wire-working machines	20	9	4	....	33
14. Welding and heat-cutting machines	15	10	2	....	27
15. Wood-working machines, n. e. s.	62	174	31	....	267
16. Planers, jointers, and edgers	52	171	109	1	333
17. Saws	215	698	254	6	1,173
18. Shapers, molders, and headers	34	95	35	2	166
19. Pulp and paper-making machines, n. e. s.	21	38	7	....	66
20. Barkers	24	34	4	....	62
21. In-running rolls	57	107	19	1	184
22. Paper products and printing machines, n. e. s.	13	39	11	....	63
23. Cutting machines	8	33	12	....	53
24. Presses	47	80	29	....	156
25. Stayers	17	46	15	....	78
26. Tanning machines	7	25	3	....	35
27. Leather-working machines	33	46	15	....	94
28. Rubber-working machines	16	45	10	....	71
29. Textile machines, n. e. s.	9	28	3	....	40
30. Carders	18	42	13	....	73
31. Pickers	13	25	10	1	49
32. Sewers	13	33	....	....	46
33. Finishers and launderers	8	11	7	1	27
34. Knitters	23	37	2	....	62
35. Cutters	14	19	5	....	38
36. Weavers	63	55	5	....	123
37. Spinners	8	22	2	....	32
38. Flax-working machines	....	25	5	....	30
39. Food products, laboratory, and tobacco machines	37	82	32	....	151
40. Bakery machines	4	28	18	....	50
41. Bottling machines	11	19	3	....	33
42. Office machines	1	....	....	....	1
Totals	3,951	3,792	1,115	17	8,875

TABLE 24.—Continued

Cause	Temp. Dis.		Perm. Dis.	Death	Totals
	Med. Aid only	Compensation			
C. Hoisting Apparatus:					
1. Elevators	38	100	15	5	158
2. Cranes	46	153	23	3	225
3. Conveyors	46	115	24	1	186
4. Other hoisting apparatus	97	302	62	8	469
Totals	227	670	124	17	1,038
D. Dangerous Substances:					
1. Steam escapes	40	68	1	5	114
2. Explosives	33	91	13	9	146
3. Electric currents	35	69	3	9	116
4. Conflagrations	1	3		1	5
5. Hot and inflammable substances and flames	362	893	15	4	1,274
6. Corrosive substances	116	114	9		239
7. Poisonous substances	13	45	1		59
Totals	600	1,283	42	28	1,953
E. Stepping on or Striking Against Objects:					
1. Stepping on objects	219	283	1		503
2. Striking against objects	619	809	39	1	1,468
Totals	838	1,092	40	1	1,971
F. Falling Objects:					
1. Falling objects—from collapse of structures	1	15		1	17
2. Falling objects—from elevations	320	328	17	6	671
3. Falling objects—into excavations		2	1	1	4
4. Falling objects—in mines and quarries	175	181	6	13	375
5. Falling objects—other	120	362	34	19	535
Totals	616	888	58	40	1,602
G. Handling Objects:					
1. Heavy objects—loading, carrying, rolling or piling	1,761	3,976	207	8	5,952
2. Sharp objects	261	360	14		635
3. Hand trucks, carts and wheelbarrows	165	458	13	3	639
Totals	2,187	4,794	234	11	7,226
H. Tools:	836	1,593	107	2	2,538
I. Runaways and Animals:					
1. Runaways	2	40	10	5	57
2. Animals	42	142	8	2	194
Totals	44	182	18	7	251
J. Moving Trains, Vehicles, etc.:					
1. Train wrecks	2	7		1	10
2. Struck by or caught between cars and engines	8	54	12	8	82
3. Other causes, cars and engines	7	32	16	2	57
4. Mine and quarry cars	67	122	4		193
5. Automobiles and other power vehicles	50	167	12	4	233
6. Animal drawn vehicles	25	171	8	2	206
7. Boats—power driven		6	1		7
8. All other	1	4			5
Totals	160	563	53	17	793

TABLE 24.—Continued

Cause	Temp. Dis.		Perm. Dis.	Death	Totals
	Med. Aid only	Compensation			
K. Falls of Persons:					
1. Fall—from elevations	91	377	31	17	516
2. Fall—from ladders	54	228	21	5	308
3. Fall—Into excavations, pits and shafts	48	125	4	4	181
4. Fall—on level	425	1,147	51	2	1,625
5. Fall—into elevator shafts	8	25	1	2	36
6. Fall—from vehicles	40	234	13	6	293
7. Fall—from collapse of support	48	271	24	4	347
8. Fall—on steps or stairways	28	100	5	1	134
9. Fall—into tanks and vats	4	14	2	....	20
10. Fall—from tool slipping	20	60	3	....	83
Totals	766	2,581	155	41	3,543
L. All Other Causes:					
1. Flying fragments	1,182	362	84	1	1,629
2. Doors, gates, windows, and covers	71	125	21	....	217
3. Inhalation of gases, fumes, etc	34	34	1	2	71
4. Immersion in water and drenchings	....	3	....	20	23
5. Exposure to elements	15	32	4	1	52
6. Violence	2	7	....	1	10
7. Cave-ins	7	35	2	7	51
8. Not elsewhere specified	9	3	1	....	13
Totals	1,320	601	113	32	2,066
Grand Totals	11,769	18,476	2,157	227	32,629

TABLE 25

BLOOD-POISONING CASES, 1919, SCHEDULE 1

Ascribed to time of injury				218
Developed	1	day	after injury	267
“	2	days	“	205
“	3	“	“	167
“	4	“	“	156
“	5	“	“	92
“	6	“	“	59
“	7	“	“	56
“	8	“	“	29
“	9	“	“	20
“	10	“	“	20
“	11	“	“	15
“	12	“	“	8
“	13	“	“	8
“	14	“	“	4
“	15	“	“	5
“	16	“	“	6
“	17	“	“	2
“	18	“	“	4
“	19	“	“	1
“	20	“	“	5
“	21	“	“	1
“	22	“	“	2
“	23	“	“	4
“	24	“	“	1
“	25	“	“	4
“	32	“	“	1
“	33	“	“	1
“	39	“	“	1
“	45	“	“	1
“	48	“	“	1
Immobilized joints due to infections				27
Amputations due to infections				9
Deaths due to infections				12
Total cases infections				1,412

TABLE 26

DEATH CASES, 1919, SCHEDULE 1

Number of Cases

Pension Awards	119
Limited Pension Awards	2
Lump Sums	33
Funeral Expenses, Medical Aid only	72
Medical Aid only	1
Total	227

Number, Dependancy, Relationship, and Residence of Dependants

Relationship of dependants	Totally Dependant	Partially Dependant	Resident in Ontario	Not resident in Ontario
Widow	111	1	104	8
Child	222	......	209	13
Mother	2	26	22	6
Father	1	28	20	9
Other	2	1	2	1
Totals	338	56	357	37

Time Between Injury and Death

3	workmen	survived	1	day	After accident
3	"	"	2	days	"
5	"	"	3	"	"
3	"	"	4	"	"
1	"	"	5	"	"
3	"	"	6	"	"
1	"	"	7	"	"
2	"	"	8	"	"
1	"	"	9	"	"
3	"	"	10	"	"
1	"	"	11	"	"
1	"	"	12	"	"
2	"	"	13	"	"
1	"	"	14	"	"
1	"	"	18	"	"
1	"	"	19	"	"
1	"	"	23	"	"
1	"	"	25	"	"
1	"	"	26	"	"
1	"	"	36	"	"
1	"	"	37	"	"
1	"	"	57	"	"
1	"	"	60	"	"
2	"	"	69	"	"
1	"	"	94	"	"
1	"	"	102	"	"
1	"	"	113	"	"
1	"	"	116	"	"
1	"	"	141	"	"
1	"	"	256	"	"
1	"	"	275	"	"
1	"	"	311	"	"

CHAPTER VI.

REPORT ON THE CONDITION OF DISABILITY PENSIONERS UNDER THE ACT

By Statistician of the Board

The results of a survey of some of the permanent disability pensioners under the Act appeared as Chapter VI of the Report for 1919. It was thought well to complement that survey with a study of the present condition of all disability pensioners under the Act. Accordingly, a form to be filled in was sent to each pensioner and the tabulated results of the enquiry are gathered together in this article.

Disability Pensions Awarded by the Board

From the inception of the Act, January 1, 1915, to January 1, 1921, the Board made 1,974 pension awards for disability, there being 1,644 in Schedule 1, 297 in Schedule 2 and 33 Crown cases. The present status of all pensions awarded is as follows:

Status	Schedule 1	Schedule 2	Crown Cases	Totals
Pensions expired—				
by elapse of term	21	..	..	21
by death of pensioner	32	11	..	43
Pensions commuted—				
pensioner returned to Europe	62	11	..	73
all other reasons	11	7	1	19
Pensions rescinded	7	..	..	7
Pensions suspended	26	3	1	30
Pensions continuing	1,485	265	31	1,781
	1,644	297	33	1,974

In 134 cases of pensions continuing the information obtained is incomplete. or the pensioners failed to return the forms sent them. This study, therefore, deals with 1,647 cases.

Condition of Employment of All Pensioners

At the time of reporting (December 10, 1920—May 10, 1921) there were 79 pensioners unable to work, 18 were going to school or were employed at home and 95 were in business for themselves. There were 980 employed and 475 unemployed. Excluding those unable to work or going to school or in business for themselves, 67.35 per cent. of pensioners were working and 32.65 per cent. were unemployed.

Of the 980 employed, 463 were employed by the same employer for who they were working when injured and 517 were not.

Of the 475 unemployed pensioners, 113 have done no work since injured and 362 have worked.

Pensioners Unable to Work

There were 79 pensioners reported as being unable to work. Of these 59 were rated as 100% and 7 as between 70% and 100% disabled by injury and were in receipt of pensions corresponding to the disabilities. The remaining 13 were unable to work from causes extraneous to injury, such as old age, insanity, illness or subsequent accident.

Included in the 79 are three females, ages 19, 23 and 57, all single, and of British allegiance. One suffered permanent injury to the spine, the others to the limbs.

Of the whole group, 23 were single, 3 widowed and 53 married at the time of accident; 69 were of British allegiance and 10 were not. The average age at time of injury was 46.65 years and the average wages were $21.04 weekly.

In 19 cases the pensioner boards; in 22 he rents; in 24 he owns his own home in whole or part; 2 live at home or with relatives; 3 are in indigent homes or in relief institutions; 3 are in insane asylums; and 6 are in hospitals.

In 2 cases the pension is being saved. In the remaining 77 cases it is being used in living expenses. Seven pensioners state that the pension is the sole source of income.

Pensioners Going to School or Employed at Home

There are 16 pensioners going to school and 2 females who, subsequently marrying, are employed at home. Of the 18, 2 are disabled 60% to 70%; 1, 40% to 50%; 4, 30% to 40%; 7, 20% to 30%; and 4, 10% to 20%.

The three females included in this group were 11, 19 and 20 years old, respectively, at the time of injury, and their average wage was $6.50 weekly. They were all single and of British allegiance.

Of the 16 pensioners going to school, 15 were males and 1 female. Their average age at the time of injury was 16.63 years and their average wage was $13.25 weekly. Two board, one is in an industrial school and 13 live at home or with their relatives. Five save their pension, 2 spend it for general living expenses and 9 spend it specifically for their education.

Pensioners Working For Themselves

Ninety-five pensioners are self-employed, of whom 41 are farming, bee-keeping, poultry-raising or truck gardening, 2 are shoe-cobblers, 2 plumbers, 2 cutting timber, 1 driving a "jitney bus," 2 machinists, 1 barber, 1 shoe-shiner, 1 wood-worker, 2 blacksmiths, 2 jobbing carpenters, 3 peddlers, 4 carters, 6 odd-job men, 1 contracting stone-mason, 2 rural-mail delivery men, 1 newsboy, 1 painter and 5 are selling on commission, while 9 keep shops, 1 a boarding house, 1 runs a laundry, 1 an ice business, 1 a garage, and 1 a pool room, and 1 man takes in washing. Forty-four could not state their earnings definitely. The average wages for the 51 who could was $14.42 weekly.

The average age at time of injury was 36.39 years and the average weekly wage was $19.81. There were 85 of British and 10 of foreign allegiance. Married men numbered 68, single men 25 and widowers 2.

Of the 95, 42 were rated 10% to 20%; 24, 20% to 30%; 13, 30% to 40%; 1, 40% to 50%; 7, 50% to 60%; 2, 60% to 70%; 3, 70% to 80%; 1, 80% to 90% and 2, 100% disabled.

Thirty rent, 43 own, 14 board and 8 live at home or with relatives. Three are saving their pension, 72 are spending it in general living expenses, 7 are putting it into their business, 9 are paying for their homes, 2 are spending it on medical expenses and 2 are keeping up insurance with it.

Pensioners Unemployed

There were 475 unemployed pensioners at the time of survey. According to reports received at the time of accident their average age was 36.22 years and their average wages, $19.90 weekly. There were 267 married, 197 single and 11 widowed.

Nearly 24 per cent. of the unemployed have done no work since injured, there being 113 cases. Included are 7 females, of whom 3, aged 19, 47 and 35, respectively, are living at home or with relatives. Of the 113, 33 have been disabled less than one year, 24 more than one but less than two years, 16 more than two but less than three years, 18 more than three but less than four years, 14 more than four but less than five years and 8 more than five but less than six years, as compared with 36, 65, 81, 73, 65 and 42, respectively, who have worked. Of those not working at all, 92 were of British and 21 were of foreign allegiance, while of those who have worked, 279 were of British and 83 were of foreign allegiance. Seven females have done no work, and 6 have.

Of the 113 not working at all, 20 were rated between 10% and 20%; 28 between 20% and 30%; 34 between 30% and 40%; 5 between 40% and 50%; 9 between 50% and 60%; 5 between 60% and 70%; 12 between 70% and 80%; 9 between 80% and 90% and 1 between 90% and 100%, while of the 362 who have worked, 183 were rated between 10% and 20%; 88 between 20% and 30%; 35 between 30% and 40%; 24 between 40% and 50%; 12 between 50% and 60%; 6 between 60% and 70%; 8 between 70% and 80%; 2 between 80% and 90% and 4 as 100%. Twenty-one of those who have worked were over 60 years of age when injured and an equal number of those who have not worked.

Twenty-two of the 113 live at home or with relatives, 27 own in whole or part, 24 rent and 40 board. Of the 362, 35 live at home or with relatives, 68 own or partially own their own homes, 115 rent and 144 board.

Ten pensioners who have worked are using their pensions to pay insurance premiums, 4 are sending it abroad, 24 are saving it, 4 are paying medical expenses, 13 are putting it into their properties, 21 are paying for furniture and 1 for clothing on the instalment plan and 285 are using it in living expenses. Of those who have not worked, 3 are saving their pension, 3 are paying for properties, 5 are sending it abroad, 1 is paying medical expenses and 101 are spending it for living.

The average period of unemployment for those who have worked since injury is 2.29 months, there being 165 unemployed for less than 1 month, 88 for more than 1 but less than 2 months, 37 for more than two but less than 3 months, 47 for more than 3 but less than 6 months, 18 for more than 6 months but less than a year, and 7 over a year. The average period of unemployment for those who have not worked since injury is 27.69 months.

Pensioners Employed

At the time of reporting there were 980 pensioners employed, 463 by the same employer in whose employ they were hurt, and 517 by different employers. The average age at time of injury was 37.41 years. The average wage was $20.95. The average wage now is $25.02 weekly, an increase of $4.07 weekly. The average impairment was rated at 24.60% and pensions awarded accordingly. The gross increase in wages was therefore $4.07 (actual increase) plus $5.15 (24.60% of $20.95) or $9.22 weekly, which is 44.01%. The wages of those employed by the same employers increased from $21.91 weekly to $26.69 weekly, while the wages of those employed by different employers increased from $20.09 weekly to $23.52 weekly.

Of the 463 pensioners employed by the same employer 343 increased their wages, 23 received the same and 97 received less. Of the 517 pensioners employed by different employers 324 received increases in wages, 16 drew the same and 177 suffered reductions.

The 274 pensioners who received less wages divide, 234 of British and 40 of foreign allegiance, while there were 33 of British and 6 of foreign allegiance receiving the same wages and 562 of British and 105 of foreign allegiance drawing more wages. Of those drawing less wages, 28 were disabled more than 50% as compared with 1 of those receiving the same wages and 29 receiving more wages. Six of those drawing the same wages were disabled less than 1 year and there were 39 receiving more wages and 57 receiving less.

Females to the number of 11 are employed, 4 by the same employer and 7 by different employers. Their average wage increased from $9.32 weekly to $9.70 weekly.

Of all the employed pensioners 306 board, 334 rent, 299 own in whole or part and 41 live at home. There are 130 saving their pension, 651 spending it in living expenses, 93 paying on property, 7 for educational purposes, 35 for insurance, 5 for furniture, 1 for clothing, 38 for medical expenses and 20 are sending it abroad.

Occupational Changes Among Employed

Employed pensioners changed occupations in 636 cases out of the 980, there being 432 out of 517 cases of employment by different employers and 204 out of 463 cases of employment by the same employers. Details of changes by occupational group are given in the following table:

Present Occupational Group

Occupational Group when injured	Building Trades	Skilled	Semi-skilled	Machine Trades	Unskilled	Supervisory	Railway operation	Technical	Clerical	Light Employment	Domestic	Agricultural Employment	Apprentice	Total
Building Trades	22	2	3	3	9	4	..	..	4	14	..	..	..	61
Skilled	4	104	7	11	37	9	1	..	9	32	3	2	1	220
Semi-skilled	1	6	15	4	6	1	1	..	3	7	..	1	..	45
Machine Trades	8	22	4	60	56	9	1	1	18	41	4	2	1	227
Unskilled	6	16	13	22	143	2	1	1	20	49	9	5	..	287
Supervisory	..	3	..	..	3	20	1	..	4	4	..	..	..	35
Railway Operation	..	6	4	5	12	..	16	..	18	9	..	2	1	73
Technical	..	..	1	..	..	..	..	2	2	..	..	..	..	5
Clerical	..	1	..	..	1	..	..	..	2	..	..	..	..	4
Light Employment	..	1	2	..	1	..	..	..	3	8	..	1	..	16
Domestic	..	..	..	..	..	..	..	..	..	..	3	..	..	3
Apprentice	..	2	..	..	1	..	..	..	1	..	..	..	..	4
Totals	41	163	49	105	269	45	21	4	84	164	19	13	3	980

Prosthetic Appliances

Prosthetic appliances were reported in use in 662 cases. Of these 197 were substitutes for upper and lower extremities. There were 47 arms, of which 27 were reported as being unsatisfactory, 26 hands of which 11 were unsatisfactory, 110 legs of which 52 were unsatisfactory, and 14 feet of which 5 were unsatisfactory. Supporting bandages or braces were used in 81 cases, of which 16 were unsatisfactory. Glasses were worn in 167 cases, 139 with satisfaction. Unsatisfactory artificial eyes were worn in 63 cases and satisfactory eyes in 116 cases. Orthopaedic plates or shoes give satisfaction in 21 cases; in 4 cases they do not. Fingers were satisfactory in 5 cases and not satisfactory in 1 case. Canes or crutches were used in 7 cases and were reported satisfactory in each case.

Awards Reconsidered by The Board

Besides refusing to commute pensions to lump sums in over ninety per cent. of all cases, the Board reconsidered 184 cases. In 79 cases the award was confirmed once, in 5 cases it was confirmed twice; in 38 cases the pension was increased, and decreased in 3 cases; in 27 cases one additional, and in 2 cases two additional lump sums were awarded; in 5 cases the form of pension was changed, and in 25 cases further commutation (in part) was made.

Conclusions and Comment

The pensions awarded by the Board seem not only to have equalled and surpassed "fifty-five (now sixty-six and two thirds)per cent. of the difference between the average weekly earnings of the workman before the accident and the average amount which he is earning or able to earn in some suitable employment or business after the accident" but to have taken care of the increase in wages generally. Including the impairment rated and paid for by the Board, the average wage among employed pensioners at the end of 1920 was $30.17 weekly, while the average wage of all injured in 1919 was $22.26 weekly. Over 67 per cent. of the employable cripples were working at a time when unemployment was rather prevalent, and the unemployment among the pensioners was due rather to inability to secure positions than to disinclination to work, although certainly a small residue have determined that their working days are over.

The tremendous factor of the varying of individuality can hardly be established by averages or by figures in the mass: a knowledge of the individuals is necessary. One man, rated as a permanent total disability, will find work he can do and at least partially re-establish himself in the industrial world, while another, with a comparatively minor disability, will nurse that disability to the utter exclusion of cares and responsibilities. Furthermore, weak natures shocked by accident and disability often succumb to discouragement and idleness.

The wisdom of refusing commutations of pensions into lump sums is indicated. The average (actual) wage of employed pensioners was $25.02 weekly while the average earnings of those in business for themselves was $14.42. Nevertheless, there is a marked insistence, particularly among foreigners, for lump sums. For other reasons the Board has freely reconsidered cases.

While occupational changes are many and often among pensioners, they are perhaps no more frequent than among workmen generally. The changes show, among other things, that occupational re-training is not always a pre-requisite of employment of pensioners. In point of fact the great bulk of Workmen's Compensation disability pensioners in Ontario have rehabilitated themselves, quietly, quickly, and efficiently.

Nor is the application of an artificial appliance, chosen at random by the pensioner or his friends or by his doctor or sold to him, a sure method of rehabilitation. The appliances oftentimes are unsatisfactory or ill fitting or cause pain, the stump breaks down, the type of appliance is not suited to the individual needs, etc.

Disability is most felt almost immediately after accident. Wages tend to lessen, then to increase gradually to normal or to near equality with those of non-disabled workers. In some cases the disability acts as a spur, and resolution and courage put the pensioner ahead of his fellow-workers without disabilities.

Although the difficulty of drawing summary conclusions is present herein, it might be said that the data collected seem to indicate among other things that the pensions awarded by the Board are adequate, that there is an opportunity for almost every pensioner to become more or less self-supporting, provided the opportunity be seized, and that direction of pensioners for at least a little while after their surgical recovery would likely hasten industrial re-establishment.

APPENDIX

LETTERS OF APPRECIATION

From Beneficiaries

"I beg to convey my thanks to you for your prompt attention to my case. It certainly is a great benefit to a working man with a family to look after, and I appreciate it very much. I thank you."

"Will you please accept my thanks for the way you 'rushed' my award through. Very sincerely yours."

"Thanks for the splendid way you treated me while injured. I think this Board is a great boon to the laboring man."

"I wish to thank you and express my appreciation for the prompt and efficient way in which you have looked after me during the time my arm was broken. With many thanks, I remain, yours respectfully."

"On receiving my last cheque I must thank you for your promptness and accuracy. I must also add that I find the Compensation Board very just and correct to deal with. Am yours very truly."

"May I take this opportunity of thanking you for the promptness with which you settled my claim. During the past four years I have received nothing but courtesy and justice from your hands."

"Just a line to wish you A Merry Christmas and to ask you to please accept my heartfelt thanks for the prompt way you have always sent my cheques and what a help and comfort the money has been to the children and myself. Very sincerely."

"I received your cheque last night and cannot explain in words how I and my little family appreciated your kindness shown to us in my sore accident, and may God's blessings be with you all."

"Received your letter and cheques to-night and am deeply grateful to you for the way in which you have solved the problem of getting my course for me. Thanking you for the interest you are taking in my welfare, I remain, yours truly."

"I take the opportunity to thank you very kindly for the generosity and forethought you have shown to my son Harry, and to assure you we are all glad to belong to a country which has such grand institutions. Thanking you again, we remain, sincerely yours."

"I take the privilege at this time to express my gratitude to you for your promptness in making the returns of compensation for the injuries received while in Craighurst. It truly was a great help to myself and family during my being forced to lay off from work."

"Please accept thanks to your Board. We are in receipt of cheque for One Thousand Dollars. As a compliment to your department may I mention such prompt help comes as a great assistance to one and is very creditable to all concerned. I am, yours sincerely."

From Employers

"Enclosed please find cheque to cover my compensation fees. This is one of the most cheerful acts I perform as I feel that myself and employees are protected."

"We thank you for the promptness with which this claim was settled. We believe the Workmen's Compensation Act is one of the best that the Ontario Government has put in force. Yours respectfully."

"The report is certainly interesting and we are delighted with the system as compared with conditions before the Act was in force. Yours truly."

"Employers should rejoice that such an organization has been brought to such a degree of efficiency where by a small payment they are protected in their construction work from employees, law suits and endless expense. In full appreciation of this great organization, I am, yours truly."

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REPORT

OF THE

Ontario Board of Parole

For the Year ending October 31st

1920

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
Printed and Published by CLARKSON W. JAMES, Printer to the King's Most Excellent Majesty
1921

To His Honour Lionel Herbert Clarke,
Lieutenant Governor of the Province of Ontario.

May it Please Your Honour:

I have the honour to present herewith for your consideration the annual report of the Ontario Board of Parole for the year ending October 31st, 1920.

Respectfully submitted,

H. C. Nixon,
Provincial Secretary.

Toronto, February 18, 1921.

Toronto, December 15, 1920.

Sir,—I have the honour to submit herewith to be presented to His Honour the Lieutenant Governor, the Annual Report of the Ontario Board of Parole for the official year ending October 31st, 1920.

I have the honour to be, Sir,

Your obedient servant,

ALFRED E. LAVELL,
Parole Commissioner.

THE HONOURABLE H. C. NIXON, M.P.P.,
Secretary of the Province of Ontario.

REPORT

OF

The Ontario Board of Parole

for the year 1919-20

The Ontario Board of Parole was first appointed in 1910. Its members now consist of the following:

Mr. Hamilton Cassels, Chairman, Mr. T. H. Preston, Col. Noel Marshall, Mr. Daniel Miller, Mr. G. Y. Chown, Mr. W. W. Dunlop, Mr. W. A. Evans. Its executive officer and secretary is Dr. Alfred E. Lavell.

Since the last report of the Board was printed, the Board has lost a highly esteemed member in the person of the late Col. A. H. Macdonald, of Guelph, who had from the beginning of its work rendered most valuable and faithful service to the Board, not only as a member but also for some time as its chairman.

The Board has also to record the death of Dr. J. T. Gilmour, who for many years was Warden of the Central Prison, and finally was the efficient and valued executive officer of the Board.

Both these gentlemen by their extensive knowledge of criminal matters and of men, and by their deep interest in the welfare of every one who came before them to be dealt with, have placed the Province under a lasting debt to them for their fine public services.

Since the last report issued by the Board there has also passed away the statesman who, when Provincial Secretary of Ontario, established the Board of Parole, viz., the late Hon. W. J. Hanna. The Board's record has, ever since its establishment, justified Mr. Hanna's humanity and judgment in the legislation which through him was placed on the statute books; but for him to take this action at that time meant much painstaking work, clear thought, administrative ability and courage. The cause of criminology in Ontario was during his term of office permanently advanced.

The work of the Board, from its inception in 1910, has steadily increased, especially during the last year or two. For contrast it may be noted that two years ago, 1916-17, the total number of cases dealt with in the year was 164. During the year 1919-20 it held eighteen meetings at the various institutions, and considered 582 cases. Of these 120 were paroled, 127 were recommended to Ottawa to be released on ticket-of-leave and 143 were refused. The remainder were deferred, or when their cases were presented had passed beyond the Board's jurisdiction.

Every individual case is considered by itself and upon its own merits. Through its executive officer the circumstances and facts relating to the possible parole of every convicted person are investigated and placed before the Board. These include the record at home, in school and in employment; the condition of the home surroundings; the statement and opinion of the trial Judge or Magistrate; where the convicted person will live and work if released on parole; behaviour in detention, and every other possible fact that will aid the Board to come to a just decision. Each offender, too, is consulted and interviewed by the Board.

The Board of Parole is not an Appeal Court and accepts as final the findings of the Court in which the person was convicted, but under Cap. 287, R.S.O. 1914, Sec. 19, everyone sent to the Ontario Reformatory must be given an indeterminate sentence. In all these cases the Board of Parole has power to release conditionally on parole and when so released they are under the control of the Executive Officer of the Board.

The Board regrets that—contrary to the statute above quoted and to the best interests of the offenders and of the Province—some Judges and Magistrates still give definite sentences. The Board has then no power except merely to recommend these definitely sentenced persons to the Department of Justice. It has seen many cases of hardship resulting from the fact that it has power in certain cases coming before it, and in other even more pressing and less offensive cases it is not able to act except to recommend. When it does recommend to the Department of Justice the release of an offender, on ticket-of-leave, that Department quite needlessly reviews and duplicates all the investigation which the Board of Parole has already thoroughly made, but even though the Department of Justice covers all the ground it still has not the advantage possessed by the Ontario Board of Parole because the latter, in addition to all other facts, interviews the man himself. The Board believes that it is because of this inability of the Department of Justice to meet the offender face to face that the Department so often refuses to grant the reasonable and proper recommendation of the Board. But even when the Department of Justice approves of the recommendation of the Board the person so recommended is not released on parole but upon ticket-of-leave. He is, therefore, not necessarily under the Officer of the Board (though the Board is glad to record that recently a number have been so placed) but may have to report to the police or other official who may or may not be vitally interested in his welfare. Furthermore, the ticket-of-leave man is not under the same direct authority and guidance as is the man on parole.

The procedure under an indeterminate sentence is far superior to this in its effectiveness for the good of all concerned, and the Board is, therefore, glad to report that every year fewer convicted persons are admitted to Ontario institutions on definite sentences.

The Board cannot refrain from expressing its surprise that in view of the above-mentioned statute and of the Ontario Parole Act and its provisions any Judge or Magistrate whatever desires to take the responsibility of committing a man to a definite term. On this point we beg to quote from a former report:—

"'How and when can we make him better?' What Judge can give a time limit to the latter question? When a Judge is elevated to the bench, is he simultaneously endowed with a superhuman wisdom, giving him a prophetic vision that enables him to read the future and tell how many years hence a delinquent will be reformed and fit to mingle with society? If so, all Judges would impose the same sentence for similar offences. Do they? Most assuredly not. Then, which sentences are right and which are wrong? If the definite sentence deals out even-handed justice to all, why do we see so much jockeying amongst lawyers defending those accused of crime to get a certain kind of case before certain judges, and their great anxiety to avoid other judges? How is it that the criminal codes of no two countries agree on the extent of imprisonment meted out for similar offences? Every prison register where the definite sentence prevails reveals the greatest inequalities in prison terms for precisely similar offences. How can it be otherwise when the degree of moral indignation against the crime in the mind of the Judge is the determining factor in the length of the sentence? Can all Judges have the same degree of indignation, or can any one Judge always hold the same opinion? Sentencing a man to prison is always a judicial act, but there the actual relations between the Judge and the criminal end, and the Judge sees no more of the man whom he has sentenced, and has no further personal knowledge of his conduct or progress. How then can the Judge intelligently fix a date for the man to be released? If a physician sent a patient to a hospital naming the date of his discharge, would it appear reasonable?"

The Board of Parole has no foolish delusions as to the redemption of all criminals to good citizenship. Some of these are so physically, mentally and morally defective that they will need the care of the State all their lives. Some seem to have made up their minds definitely and finally to a life of crime. The Board does not believe in the sentimental coddling of criminals. But in its ten years of personal experience with thousands of offenders against the law in our Province it is lead to a firm belief that the great majority of these have the will and the ability to reform. It has seen hundreds of men paroled and guided into good citizenship who under the old system would in all probability have gone hopelessly into a life of crime.

The Board believes that most offenders on a first conviction should not be placed in close custody at all, but should be out on probation under careful supervision.

They have really learned their lesson and the punishment of arrest, trial and conviction has been adequate and effective. To attain the same object as probation many Judges and Magistrates now suspend sentence on a convicted man. A sentence to a term on probation would be in nearly every case far more effective. Nothing defeats the ends of justice more than clemency loosely administered. Authority to place an offender on probation would enable a trial Judge to "season justice with mercy," and at the same time vindicate the law, as he cannot do under present conditions.

Again, the Board believes that if, because of a further conviction or other reason, a convicted man clearly needs punishment, a brief period of solitary confinement, and in many cases spanking (this does not mean the lash) followed by a long period of parole would be far better for the prisoner and the country than a long imprisonment of many months and years. The latter, except in cases of persistent offenders whose freedom is clearly a menace to society, is an economic absurdity.

Serving his term in prison, the sentenced man is a burden to the State, and by the surroundings of his incarceration is, in spite of improvements in our prisons, and many good officials, becoming unfitted for freedom and re-establishment. On the other hand, when serving apparently as a free man outside on parole, the offender is supporting himself and his family and is learning to be a good and useful citizen. If he breaks parole he is summarily dealt with and returned at once to confinement, but experience shows that only a very few fail.

The record of this last year will bear this out. Even leaving out all who have been released on ticket-of-leave, or who are outside through other means and are making good, over 93 per cent. of the men released on parole last year were actually re-established in society as good citizens. Even the 7 per cent.

who failed did not fail very badly, and the Board has ultimate hopes of most of these.

Even financially the results are worthy of careful consideration by Ontario citizens. Had the paroled men not been paroled, and had they, therefore, served their full time, they would have cost the Province, at the very lowest estimate for maintenance, guardianship, etc., $1.35 per day, or a total for this year just closed of $40,201.65. But as these men were paroled and were not being supported, this meant a saving to the Province of that sum. In addition these men have actually earned wages outside totalling $104,525.75. The total expenses incurred by and through all the operations of the Board of Parole were during the year about $10,000.00. Through the operations of the Board the Province was, therefore, saved the net sum of $134,727.40 during the year, and in addition it has scores of citizens saved from crime to careers of usefulness.

These are the facts that inspire the Board to prosecute its increasing work. Its members are not paid financially for their labours, but they feel well compensated by the knowledge of the reformation and re-establishment of many erring members of society. They are also gratified and heartened by the increasing co-operation of Judges and Magistrates who give indeterminate sentences, and who also take great pains to give valuable information and counsel to the Board when the men they have sentenced come up for consideration before the Board.

The Board desires to express its satisfaction with the progress of Ontario's youngest and largest reformatory at Burwash. Started as an experiment in the bush near Sudbury, when the Guelph buildings were temporarily handed over for war purposes, this 32,000 acre ranch has developed beyond the thought of any of us. The combination of bush and cleared farm land gives healthy out-of-door employment to its inmates all the year round. The effect of this continuous hard work is shown in the improved physique of the men. Furthermore, it has had no small part in the subsequent reformation of many and their successful re-establishment in society.

The Board is pleased to know of the proposals and efforts toward the better classification of those serving terms in our various Provincial institutions. This difficult problem, far more difficult than the uninitiated realize, presses for solution. The segregation and the treatment of all drug addicts and of V. D. cases might be one of the initial steps in this direction. If the probation system for most first offenders were brought into force the problem of the contamination of young culprits by older criminals would be largely removed. Defectives should, of course, be treated as defectives, not as criminals.

After a careful review of its operations for the past year, the Board hopes that in the not far distant future all first offenders of Ontario, and all second offenders with a sentence, say, of five years or less, will be placed under the jurisdiction of the Province of Ontario instead of being committed to the Federal penitentiary, and that the beneficent and effective work of reformation through probation and parole may be widened to include practically all those offenders against the law in this Province who have not as yet journeyed far on the criminal road.

Ontario Department of Agriculture

REPORT OF COMMITTEE

ON

RURAL CREDITS

1920

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO
Printed by CLARKSON W. JAMES, Printer to the King's Most Excellent Majesty
1921

Printed by
THE RYERSON PRESS

To His Honour, Lionel L. Clarke,

Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:

I have the honour to present herewith for your consideration the Report of the Committee on Rural Credits, 1920.

Respectfully submitted,

MANNING W. DOHERTY,
Minister of Agriculture.

Toronto, 1921.

TO THE HONOURABLE MANNING W. DOHERTY,

Minister of Agriculture,

Province of Ontario.

SIR,—We, the members of your committee appointed to investigate the problem of Rural Credits, with a view, if deemed advisable, of recommending a system suitable to the agricultural needs of the Province of Ontario, beg to submit the accompanying report.

Your obedient servants,

W. T. JACKMAN.
THOS. MCMILLAN.
M. H. STAPLES.

November, 1920.

Report of Committee on Rural Credits, 1920

1. THE IMPORTANCE OF AGRICULTURE TO THE NATIONAL WELFARE.

In view of the commanding importance of agriculture in the economic life of the country, and with a recognition of the outstanding fact that just to the extent that agriculture flourishes can other great industries which hinge with and depend upon it be maintained in operation, it is becoming increasingly clear that agriculture " is the true foundation of trade and commerce," that it is "the foundation of the riches of states," that it is the great source whence the whole nation is clothed and fed, and that its varied activities not only provide the means of sustenance to our own population, but contribute in no small measure to the welfare of the Empire, of which we are an integral part, as well as to that of foreign countries. The character of agriculture has greatly changed in recent times. It is no longer regarded as a means of earning a living, but as a source of national wealth. Modern governments have been using their best endeavors to build up their respective countries with all their wealth-giving potentialities. and here is the most important of all sources of wealth, because the prosperity of agriculture underlies the entire social and economic welfare. Under the existing system of distribution of products it is impossible for the urban classes to be well cared for without having the food producers of the country carrying on successfully their basic enterprises; and without an abundant provision for the needs of the workers in the urban centres we cannot think of a successful commercial life and a developing industrial system. The urban and rural life are so closely integrated that they form one web; cause that web to be subjected to strain at any one point, and the effect is noticeable at every other point. In recent years the strain seems to have come upon the agricultural interests of this Province, and to such an extent that a comparison of the census of 1910 with that of 1900 shows a progressive decline of the rural population accompanied by a constant increase of the urban population. How great may be the accentuation of this tendency, as shown by the census figures of next year, we shall not venture to predict. A well-rounded national development is impossible with an uninterrupted increase of city dwellers, consumers of food supplies, and an incessant decline of the numbers of producers of these food supplies. The welfare of agriculture is now being recognized, the world over, as the paramount consideration. and no sound economic system can be built up except as the agricultural foundation is firmly established. In the development and prosperity of every enterprise capital has become of greater and greater importance, and in the securing of capital the role played by credit is seldom fully realized.

2. THE IMPORTANCE OF CREDIT IN THE BUSINESS WORLD.

From the earliest times simple forms of credit have been in general use, and as soon as it became known that credit could be used to take the place of money in a large measure a new era was opened up in the realm of finance. It is well known that if banks to-day could not loan their credit, but had to be satisfied with loaning only their capital, they would be unable to carry on their business in the present satisfactory manner. If they could loan only their capital, they would be unable to meet the present great demands for the expansion of business: but when every dollar of money can be made the basis of several times that amount of credit, and this credit can fulfil the ordinary functions of money, it is not difficult to see that the present extensive system of commercial practice would be wholly impossible without a credit mechanism responsive to the necessities of trade. Moreover, the employment of credit not only economizes in the use of money and makes it possible for money to do much more work than it otherwise could, but it also facilitates exchange of commodities. It is much easier to pay for goods by such credit instruments as bank notes, Dominion notes or checks than by having to count out the amount in money every time goods are purchased or sold. This is particularly true when the amount of the bill is large. If every transaction had to be settled by a money payment, the amount of these transactions would be very narrowly limited; and with the restriction of business there could not be the development of enterprise and wealth on the scale which we have to-day.

But there are two forms of credit, namely, that which is used for productive purposes and that which is used merely for securing the goods which will satisfy the wants or desires of the individual. The latter we may call, in contrast to the former, consumer's credit. This has frequently come into disrepute, and has tainted the whole conception of credit. There is still a great deal of this kind of credit. A spendthrift keeps on borrowing and spending for himself and his friends until his wealth is gone. The man in need appeals to some one with money, and gets credit up to a certain amount in order to relieve himself of his temporary embarrassment. This has been done not infrequently by kings as well as by the impecunious in lower stations in life. A man whose ship has failed to come in at the expected time, or whose harvest has disappointed him, frequently borrows to tide himself over the catastrophe until better fortune overtakes him. There are still not a few of such people who borrow—that is, who use credit, as a means of self gratification, and of whom it can be said that "he who goes a-borrowing goes a-sorrowing." All this kind of credit, designed to make up some loss already incurred and to contribute to the satisfaction of the selfish desires of the individual, usually sinks the latter deeper and deeper into debt, from which he will find it increasingly difficult to extricate himself. It produces no value out of which the loan may be repaid at a later date, and it is certain that such credit should be discouraged.

The very opposite of this improvident credit is what we have called productive credit—that is, credit which is used for the purpose of creating value. It is a credit which can be repaid out of the returns from the investment—a credit which can be employed by the borrower for increasing his wealth, over and above the amount which he has to repay as the principal and interest of the loan. The employment of credit for this purpose trains to businesslike conduct; it impresses the borrower with a sense of responsibility, and instead of weakening the character of the borrower it strengthens it. Credit of this kind is required in constantly increasing amount in order to permit the uninterrupted expansion of trade and industry and of every other productive pursuit. In order that business may expand there must be an increasing employment of capital, of labor, and of the raw materials of the business; and in order to secure this expansion there must be an increasing command of capital, which, in turn, is obtained through a regular system of borrowing.

From a mere convenience—a mere improvident, risky and costly accommodation—credit has been raised to a dignified position in the world of business. By far the greatest part of the world's business is now carried on through the use of credit. The vast fabric of business at the present time rests upon the extensive use of credit. Credit is an active, dynamic, infinitely self-multiplying force, and without it there could not have been the tremendous developments in industrial life and the expansion of commerce from the local to the provincial, national and international markets. If credit were to cease the work of production would be paralyzed and nations would be unable to care for even the primary needs of their people. Anything which affects the credit of a country, or even the credit standing of one or two important business institutions of the country, affects immediately the conduct of the country's entire business and social life. Credit is an instrument which may operate either advantageously or prejudicially. In the hands of those who know how to use it properly for productive ends it may be the means of increasing personal wealth and power, as well as social welfare; but in the case of those who do not know how to use it judiciously it may be the sword of Damocles which hangs over their heads, ever threatening them with extinction.

The word "credit" means "faith" or "confidence," in its primal significance, and before an individual can secure credit in the ordinary form of a loan he must give some security which will be adequate that the loan at maturity will be repaid. The lender must have "faith" in the borrower or in his enterprise before he will make him a loan. For his faith he naturally turns to some material foundation, for, as yet, no matter how good the intentions of a borrower may be, the fluctuations of business may make it impossible for him to repay the amount borrowed at the specified time unless there is some material surety which can be used to assure this repayment. It is this problem of security which has engaged so much attention from all business men, especially from those who are acting in a fiduciary capacity, such as bankers. Naturally credit gravitated to wealthy men, to those who could provide the necessary security for the amounts they have borrowed. They have usually known how to turn it to the best account. It is no exaggeration to say that the most valuable benefit which wealth confers upon the business man is that it permits him the largest credit. It is but another illustration of the truth that "to him that hath shall be given."

But the man who is not wealthy requires credit for his business just as much as, if not more than, the man of wealth. The community is made up, not of the few rich men whose wealth enables them to satisfy all their needs for business credit, but chiefly of those whose wealth is not so manifest, but whose well-being is essential to the welfare of the entire communal life. The average man requires credit all the more because he is not so well provided with capital. He competes with his wealthier rival, and in this competition he must frequently extend credit to his customers; consequently he is in greater need of securing credit. It is these poorer claimants for credit which have been but inadequately supplied with it.

for the reason that they have not the security which is demanded by the financial loaning institutions. A small amount of credit percolates down to them, but usually loans are made and credit is allowed to those whose security is the best. This is simply carrying out, on the part of the lenders, the good business judgment which anyone would applaud.

3. IMPORTANCE OF CREDIT TO THE FARMER.

If credit is so important that the bulk of the world's business is done on credit, and if it is so important to the individual firm that the latter at the beginning of the year arranges with its bank or banks for a line of credit up to the limit of its requirements for the year, it is equally important for the agriculturist who wishes to carry on his enterprise in the most effective ways and with the greatest amount of economy. Agriculture is the greatest industry of this country. The ability to secure capital upon reasonable terms is essential to the success of any business, and farming is especially embraced within this requirement. The successful farmer becomes more of a business man every year. He must use more machinery, buy more fertilizer, and sow better seed. He must erect better buildings, raise better stock and grow better crops. He must store his produce in order to sell in the highest-price market. He must pay cash in order to buy cheap. All these and many other aspects of the farmer's business show us the necessity of *short-term credits* for him in order to enable him to improve the quality of his agriculture, to increase the quality and amount of his output, and to augment his returns from his work. The man who borrows to increase the yield from his farm, to cheapen the cost of the growing and marketing of crops, or for any other productive purpose, does exactly what prudence dictates, because the transaction enables him to take advantage of his opportunities and to give full play to his talents while making it possible for him to do greater good to himself and his family and to become a more useful member of society by adding to the nation's wealth.

But in addition to the short-term credit requirements for providing various forms of working capital or circulating capital, the farmers have need for *long-term credit* to enable them to make investments in fixed assets and permanent improvements, the returns from which come but gradually, and as a steady flow, during a protracted period of years. The active farmer frequently desires to purchase more land, either for himself or his son; he wishes to establish a drainage system in a certain part of his farm; he may want to erect suitable buildings upon his farm. The returns from these accrue to him gradually, over a long time, and there should be some provision by which he might be able to borrow the amount required for such additions and betterments and pay back the amount borrowed from the annual returns from the investment—in the same way as a railway company pays for its rolling stock out of the income from the use of that rolling stock, or an industrial establishment pays for an extension of its plant by annual payments made from the increased income received through the enlargement of its capital equipment. In addition to these credit requirements of the landowner there should be facilities for enabling farmers' sons and tenant farmers who have comparatively little capital, but who have good character, good ability and a desire to remain on the land, to become owners of their own farms in the shortest possible time and with the utmost economy in the matter of payments. Tenancy which is merely a stepping stone to ownership may be economically upheld, but tenancy which is chronic has nothing to be said in its favor. The tenant in this case simply mines the soil, takes out of it everything that he can get, and then moves on to do the same on some other farm. This is nothing but sheer waste. But if either the farmer's son or the tenant farmer can be provided with suitable long-term credit, under reasonable safeguards, so as to prevent the movement to the cities and to encourage land ownership with all its individual and national advantages, the personal, social and economic results to the whole community would be incalculable.

The importance of these two forms of credit varies in different localities. In the older sections of the Province the need for short-term credit is felt the more keenly, whereas there is in many localities at the present time very little need for long-term credit. In such places land is not changing hands to any great extent, and where it does change ownership the seller of the land is usually willing to take a mortgage for a fair and sometimes a large proportion of the selling price. But in New Ontario there are many sections where the need for mortgage (or long-term) credit, as well as for short-term credit, is very pronounced. In these places money cannot be obtained at all by many whose land is as yet of little value, and even those who have become better established are called upon to pay eight to twelve per cent. on three-to-five-year loans, with an average rate of at least ten per cent. We recognize that the security which farmers in that part of the Province can give is by no means the best, and that the greater risk assumed by the lenders has been considered sufficient reason for charging a higher interest rate; but the demand for credit has been very inadequately met under the existing conditions, and this calls for the most careful consideration.

Even in some of the older parts of the Province it is clear that in the near future there will be very decided changes. Where the farms of the entire countryside are owned and worked chiefly by men who are well on in years it does not take much foresight to discern that in the course of a few years at the most there will have to be the transfer of ownership of these farms to younger men, and at that time there will need to be credit facilities of a more extended and liberal character than those which have prevailed hitherto if the ownership of these farms is to be attractive enough to draw men to them.

Besides, there is the constant need and desire to make farm life exercise a stronger appeal particularly to many who have left it. The "back to the land" movement will never gain very much impetus until agriculture is made more remunerative. If a business man, in starting business, could not count upon being able to get advances from others, but had to rely wholly upon his own capital, many of them would never undertake the risk. In the same way if a prospective or would-be farmer cannot count upon being able to get loans under such terms of interest and repayment as will enable him to use them profitably, he will hestitate before embarking upon his contemplated course. But if such a man can get the necessary loans to enable him to apply his labor in the most productive forms of agriculture and repay these loans gradually out of the proceeds of their investment, there will be a larger return to himself and he will be less dubious about undertaking the ownership and cultivation of the land.

4. HOW THIS CREDIT HAS BEEN MET.

Short-term (or personal) credit has usually been furnished to the farmers here in three ways:

First: The local merchant has come to the farmers' aid and carried them over from harvest to harvest. The farmers have depended altogether too much upon this system of book credit. By this system of indirect credit the farmer keeps a running account with the merchant, and when he has no choice left as to where he will trade, but must trade at the store which will give him credit, he will have to pay the highest prices for everything he buys. On such accounts he is always paying the highest (and sometimes excessive) interest rates. This is the system which usually prevails in localities remote from trading and financial centres.

Second: The farmer may take his note to the local branch bank, sometimes with one or two indorsers, and in this way get a loan for a period not to exceed three months. In order to obtain this loan without the indorsement of his note, the farmer must have a satisfactory statement of his affairs on file at the bank, in the same way as a merchant or a manufacturer. For many farmers it is very difficult to give such a statement which will represent their condition with a fair approach to accuracy. In few cases do they keep any accounts, so that a financial statement made out by the farmer, with the aid of the bank manager, may be nothing more than a well-considered guess. Then, when the manager mentally reduces the valuations of the assets represented on this statement, as he not infrequently does, it is not uncommon that the farmer's statement is insufficient as a basis for the granting of the loan.

Third: Much less frequently, it seems, the farmer gives his note to a friend or a neighbor in order to obtain the advantage of a temporary accommodation.

Long-term credit, on the other hand, is always secured by a mortgage on real property. In the earlier history of this Province the mortgage and loan companies accomplished good service by being able to mobilize capital from both the British Isles and Canada and use this capital to make loans to farmers for long terms. In this way development took place more rapidly than would have been possible without this aid. In recent times, however, particularly since the beginning of this century, the mortgage and loan companies, the insurance companies and the trust companies which formerly furnished the funds for investment on farm mortgages have found their farm mortgage loan business continually declining, until at the present time, according to the statements of the officials of these companies and the reports of the county registry offices, the amount of such loans that are held by these companies is relatively insignificant. It seems that in most counties not more than ten per cent., and usually not more than five per cent. of these farm mortgages are held by the companies. It must be clearly borne in mind that we are speaking of loans on farm lands, not of loans on urban property. The mortgages against farm lands, then, are held almost entirely by private individuals, particularly by active or retired farmers who have funds to invest. Whether, on the whole, the amount of the mortgages on farm lands is now increasing or decreasing we have been unable to determine, for it would require a great deal of search and patient collection of facts from the records of the registry offices of the counties. In some cases there are more discharges than registrations of mortgages, and in other cases the reverse is true. Since Ontario farm property has ceased to be a fruitful field for the investments of the mortgage and loan companies, they have transferred their activities in this respect to the western provinces. One of the oldest of these companies, which formerly had over fifty branch offices in this Province, has now only one and it is likely to close this agency soon.

5. INADEQUACY OF THE PRESENT CREDIT FACILITIES

The statement is frequently made that the farmer does not want to go into debt: that it should be his chief concern to get out and keep out of debt. We are asked the question, then, why do we want to facilitate the farmer's going into debt? If the same question were asked regarding a business man it would be too foolish to call for an answer, but it is equally foolish when asked regarding a farmer. But, to answer it for the farmer, we assert that the man who is capable of producing something of value to mankind, but who has not the necessary capital, is not only allowing an asset of his own to go to waste, but is depriving society of a legitimate addition to its wealth in not borrowing that capital. And if business is so organized that he cannot obtain such capital, or can obtain it only on terms which he could not accept, a serious injustice is done to him, to accumulated capital, and to society itself. A debt contracted for a productive purpose, by one able to accomplish that purpose, is one of the best of investments, for it enables the debtor to translate his character and ability into wealth and capital.

It is said, by those who declare that there is no need for a rural credits system in Ontario, that substantial farmers can always obtain credit. It is perfectly true that there are farmers who can borrow money at fair rates. But how many are in a position to secure borrowing privileges from the existing institutions to the necessary extent of their requirements? Even the substantial farmers can or do seldom use their credit to the degree that it ought to be used, for employment in their work of production, in the same way or to the same measure as manufacturers or merchants use theirs. Intensive use of the land, so as to secure the greatest returns from it, demands the employment of much larger amounts of capital than are now available. It is because capital or credit has not been extended to farmers upon such terms as are favorable to the special conditions of agriculture, that farmers, *as a class,* have not yet learned what very profitable use might be made of it in the employment of working capital, putting value into the farm and gathering it back with increase within a few months.

We are justified in saying that we would be performing a valuable service to the country, to the urban population, and to the farmer in providing him with a system of credit, at the lowest practicable cost, adapted particularly to his conditions.

But in what respects is the existing credit mechanism defective and inadequate from the point of view of agriculture? We shall endeavor to answer this question from the standpoint of both short-term and long-term necessities.

(*a*) *Short-term defects.*

In the first place, our banks are operating under the Bank Act which was not framed with the welfare of the agricultural classes in mind. We are not unmindful or unappreciative of the great benefits which have been secured through the operation of the Canadian banking system, which is one of the finest in the world, but we realize that the Bank Act, enacted when Canada was a young country and much smaller than it is to-day and when its agriculture was primitive, was designed to serve the commercial interests. This is not true of Canada alone; but in all countries the commercial banks, as their name indicates, have been intended especially to serve the needs of the commercial classes. One has only to read the sections of the Bank Act dealing with "Business and Powers of a Bank" to understand how closely these institutions are related to the activities of the trading and industrial classes. This fact, of course, has been acknowledged over and over again by our bankers. The bank's funds must be preserved in liquid form. Even in the recent amendments to the Bank Act, while two or three concessions are granted to the agricultural interests, it is distinctly stated that the banks are not to lend money under circumstances in which it will be tied up. This is simply putting into legislation and into practice what prudence has shown to be necessary in safeguarding the commercial welfare. The Act, as in force to-day, does not provide for loans to farmers except upon the security of threshed grain grown upon the farm, or for the purchase of seed grain (the return from which is pledged as security), or for buying live stock, taking as security a bill of sale or a chattel mortgage on the stock and all their offspring. How small a proportion these are of the farmer's operations will be readily apparent. While we admire the underlying principle of the Bank Act and recognize that it has worked out in a very successful way so far as the business classes are concerned, it was never conceived for the purpose of serving farmers and in its outworking it is deficient in making so little provision for the agricultural interests.

In the second place, the longest period allowed for a commercial loan is entirely too short for the farmer. The business man can use a three-months' loan satisfactorily because he usually turns over his goods or his capital five or six times a year and frequently much oftener than this. He is, therefore, sure of a turnover at least every three months and knows that from the returns from the sale of his goods he will be able to repay the loan. But a three-months' loan is of little, if any, value to the farmer. His money returns to him, generally speaking, once a year. As a general rule, he has but one turnover per year. The shortest period for which the farmer can ordinarily borrow is six months, that is, within that time he will be able to secure the returns from his investment and pay back the amount borrowed. More frequently, however, he needs the loan for eight months or a year, in order to be able to repay the loan out of the return from it. The banks are required, by their organization, to keep their funds liquid and, therefore, even a six-months' loan is usually out of the question for them. It is inevitable, under these conditions, that the 60-day to 90-day paper of the merchant should get the preference over even the six-months' paper of the farmer. It is clear, from what we have said, that the major part of the farmer's credit does not come within the scope of our banking system as now organized. If the farmer takes a loan from the bank for three months, with the expectation and sometimes the banker's promise (verbally given) of being able to have it renewed at the end of that time for another three months, by the time of maturity of the loan the commercial conditions may have changed, so that the renewal may not be granted. In that case the farmer has not had the loan long enough to make it pay for itself and he must meet the amount of the note in whatever other way he can. In addition to the limitation imposed upon the bank by the legislation and the system under which it conducts its business, the short-time loans for one to three months are more profitable and this places a further barrier to the bank's tying up its funds for periods of more than three months.

It is natural that the bank should do business with the merchant, the manufacturer, the broker, the middleman, because they may complete the processes for which they require credit within the customary period of the loan. But contrast the farmer's situation. He must wait upon the seasons; his financial returns come only when the seasons have run their course, and if the season should be extraordinary or unusual, causing a partial or total failure of his crops, he must have a longer time to meet his obligations. If he wants to buy horses, cattle or other stock for breeding purposes, he cannot sell such stock and make any profit in even six months; at least a year and often longer is required. What he needs is time enough to raise colts, calves or pigs to sell from the breeding stock he has purchased, or to keep the better stock and sell the older and poorer grades in order to meet his liability on the loan. Almost all the farmer's processes run from eight months to two, three and four years, and he is not in position to repay capital advanced for such processes until these periods expire and his returns arrive. In this connection we may ask, what better security should be required for such a loan given to an enterprising and honest farmer than a lien upon a herd of breeding cattle and their increase? In the words of a very prominent banker of the United States, whose enlightened business and diplomatic career entitles him to speak with authority, "Agriculture, considered year after year and over extended areas, is the surest of all operations in regard to returns."

In considering this problem of farm finance we shall have to recognize the fact that the whole economic organization of the farmer's world is markedly different from that of the commercial man's world and, consequently, demands different treatment. Whoever contends that by means of a few slight changes the system of commercial banking may be so adapted as to suit the requirements of the agricultural classes, ignores the radical, fundamental difference between agriculture and commercial business, which produces the deep-rooted difficulty which we have to solve. The security which the farmer has to offer is commonly understood to be good. It is, perhaps, not quite so good here as it is in England or Europe, because there is more movement of the farming population and greater difficulty in following up a migrant who may wish to conceal himself. But even so, the security may be taken to be inherently good. Unfortunately, however, it is not bankable in the banker's sense. Its precise value cannot be ascertained readily. (It must be remembered that we are speaking now of short-term loans and not of mortgage loans.) The security cannot be easily watched and controlled. There is no system of agencies, such as Dun's or Bradstreet's for commercial concerns, to keep constant observation of the farmers and give information as to changes in their financial standing to the banks. The banker does not *know* the farmer, and if the latter is to be able to raise money for his purposes his security will have to be put into a different form in order to become bankable. How this is to be done, we shall have to consider in a later section, after we have outlined some of the important systems in other countries.

(*b*) *Long-term credit defects.*

The advantages which have been secured in earlier years by the activities of the mortgage and investment companies have been already mentioned, and while their business in Ontario has dwindled to almost negligible proportions, there has been impressed upon the remaining business which they secure certain features which are by no means favorable. We speak particularly of the short duration of their mortgage loans, which are made for periods not to exceed five years. In the words of the manager of one of the most prominent of these companies, they "reserve the right at the end of the five-year period to review their investment." It seems that in the 80's and 90's of the last century mortgages were usually drawn for fifteen to twenty years, repayable on an amortization plan or at the end of the term. But as interest rates fell the outcry against these long-dated obligations became so loud that the Dominion Parliament empowered any borrower, after five years, to pay off his mortgage with a bonus of three months' interest. As a result, the practice of the companies changed, by limiting the usual mortgage to a term of five years, where it has since remained. At the maturity of the mortgage, the company may reconsider the loan. If the security is not satisfactory, because of any change in the value of the property or in the material condition of the borrower, the loan may be called in. If the rate of interest on similar investments has risen, the company may either call in the loan or renew it at the higher rate. All these elements of uncertainty are not favorable to the farmer. He wants to know, when placing a mortgage on his property for any productive purpose, that he will have the loan for a long enough time to make it productive. If it should be called in before that, the object of the loan has not been served, and he would have to get money from some other source with which to meet the demand for repayment. Agriculture is a business in which the long look ahead must be taken; its returns cannot be increased in short periods at the will of the farmer, for he is very dependent upon the vagaries of nature. Consequently, if a farmer is in a position to avoid these five-year loans he will invariably do so. Probably this is one of the reasons why company loans on farm mortgages have so greatly declined in amount and the farm mortgage business has got into private hands.

The change which we have noted from company to private lending on these mortgages shows virtually a silent, gradual revolution which has been taking place. There must have been good reasons for this change, and among them there, doubtless, were at least three which we may indicate:

(1) The fact that private individuals were willing to loan for more than five years on property in their vicinity, with the owner of which they were perfectly familiar.

(2) The lower rate of interest which they were willing to take and which still prevails for many of these loans.

(3) The fact that the land was sold by one farmer to another, and as the buyer did not have the full amount of cash with which to pay for the property, the seller would take a mortgage for the unpaid balance.

But while there are these advantages from the existing system of private loaning, there are also some defects. In occasional instances the individual lender will use his dominant position to oppress the borrower and to take advantage of him to such an extent as to extort more than his just due. But the chief defects we may group under two divisions:

1. In large portions of this Province, such as in the northern sections, which are relatively undeveloped, the amount of private funds available for such investment is small, entirely insufficient for more than a very small fraction of the demands. The risks in most cases are too great to tempt the companies to enter these sections, and, as a consequence, it is with great difficulty, and by the payment of too high interest rates, that the settlers can get even meagre accommodation.

2. The unorganized condition of the loan business when left in private hands. This makes the prospective borrower's situation one of uncertainty. He does not know whether he may be able to find a private individual in his locality who will

have funds to invest in a mortgage. Moreover, the rate of interest under this individualistic regime is widely different in different localities, even for the same kind of risk. This does not make for the fullest development of all the agricultural resources of the Province, but tends to confine agriculture to those sections in which capital is more abundant and can be had at the lower rates of interest. Equality of opportunity demands that some means should be found by which the rate of interest should be approximated to a uniform level for all, irrespective of the section in which they carry on their work.

With these deficiencies in the present facilities for obtaining suitable credit, and others which we need not mention here, it is evident that there is a fair field in Ontario for the establishment of a system of rural credits which will meet more adequately the needs of the agricultural classes. But before proceeding to the consideration of the system which we recommend, it is desirable to present in brief outline what has been done in some of the most important countries in order that we may have the background of the movement for the improvement of the methods of agricultural finance.

6. HOW OTHER COUNTRIES HAVE MET THE SITUATION AND THE DEGREES OF SUCCESS ACHIEVED.

Great Britain and Ireland.

Throughout the British Isles no great lasting progress seems to have been made in the operation of strictly rural credit societies. It is true that in England there are facilities for the formation of credit societies, but these have not developed to any extent. Perhaps the chief reasons for this lack of development are the reluctance of farmers to borrow, their unwillingness to show their financial needs to their neighbors, and their opposition to anything in the nature of unlimited liability or of becoming collective guarantors for others. In England and Wales, and in Scotland, there seems to be no national pressing need for purely rural credit societies, since the banks and merchants extend credit where required on easy terms and at fair rates of interest. Yet even in Scotland, where the banks are in a position to make loans to farmers upon the most favorable terms that a commercial bank could provide, a committee has recently reported in favor of a rural credit system. In England and Wales the movement for rural credit banks has made a beginning, for in 1906 there were 11 of these institutions, and it may be confidently expected that under the Small Holdings and Allotments Act of 1907 they will continue to increase. This Act, which enables the Government of Great Britain, under the proper authorities and subject to certain conditions, to take lands and sell or lease them at reasonable rates and for favorable long-term periods, also provides that "a county council may promote the formation of and assist co-operative societies and credit banks."

In Ireland the extension of joint stock banking facilities has been comparatively recent. These banks had branches throughout the country, usually at the market towns, and when a farmer wanted a loan from the bank he had to take with him two sureties if he hoped to get the money from that source. The expense connected with this process and the necessity of discussing his affairs with the branch managers made this source of funds practically impossible for the farmer.

Moreover, such borrowings were usually in small amounts, and the bank managers were not eager to encourage them. It is not at all unusual for a farmer to have to make a journey of ten or fifteen miles to the nearest bank. The only other source of loans are the money lenders, the most usurious type of which is the "gombeen-man," the "trust auctions," which are disastrous to the farmer, and the Loan Fund Board, which was never intended for making loans to farmers, but to afford temporary relief in small amounts to workers in the great industrial centres.

These sources of loans were wholly inadequate and unsatisfactory, and after the formation of the Irish Agricultural Organization Society in 1894, when the need for co-operative credit had been fully demonstrated, the German Raiffeisen type of bank furnished the model upon which to organize credit societies in Ireland. The characteristics of this system will be briefly mentioned when we are considering that country. The first of these Irish credit banks began operations in 1895 at Doneraile, in the County of Cork, and its success led at once to the formation of two other credit societies in 1896.

The funds of these societies were obtained from members' deposits, loans from Government departments, and other loans, mainly bank overdrafts. The purposes of the Raiffeisen banks were to encourage thrift on the part of their members through furnishing a profitable use of their funds and to use the surplus funds of the community for making loans for productive uses in that community. Reliance was placed mainly upon the deposits of members. But in applying this principle in Ireland, it was found that the poorer sections, which were in great need of credit facilities, could not provide the necessary capital for such banks. The Government, then, was the agency to which the people looked for assistance, and soon a number of societies existed for no other reason than to administer the distribution of this Government money, which their members regarded more as a windfall than as a loan to encourage self-help and to be repaid within a definite time. It became evident that in such cases the banks were not performing the function for which they were primarily established.

Other defects also became manifest. In sections where such banks could be established with the hope of securing a large amount of surplus funds, wealthy men refused to deposit their money because of the provision of unlimited liability for the debts of their poorer neighbors. The inability of the societies to pay for the services of competent secretaries militated against their success. The practice of renewing loans beyond the period for which they were granted, without proof that they would be used for any new purpose, or that any additional profits would follow from the delay in repayment, was used too freely, and this laxity of the individuals in meeting their obligations caused both moral and financial defects. The losses of some credit societies year after year did not inspire any confidence in their management, but acted as a detriment to their proper usefulness. The failure to furnish the returns required regarding their business, accompanied by general apathy and inefficiency of many societies could have but one inevitable result, namely, to bring these institutions into disfavor with the people and the governing authorities.

Notwithstanding these unfortunate results in not a few instances, the Irish Agricultural Organization Society, in the early years of the rural banks, said in one of its reports: "We attach very great importance to the introduction of the Raiffeisen system into Ireland, and are inclined to put it in the forefront of our propaganda." The Society regarded it as of great educational value, as a necessity for raising a barrier against the increasing power of usury, and as desirable in developing responsibility and business methods among the farmers. With this attitude on the part of the Society at that time, a rapid advance was made in the organization of the credit banks. Thirty-three were formed in 1899, making a total of forty-eight in operation at the end of that year. This expansion was promoted by the increased facilities for obtaining capital, for the Department of Agriculture began to supply money in 1901, the Congested Districts Board continued to give larger and larger amounts, while the joint stock banks, which at first had held aloof from the credit banks, became reconciled to them in 1902, and were willing to advance money to them. By 1904 the total capital of the credit societies amounted to over £28,000, over half of which was furnished by government loans. In the period from 1904 to 1908, when their number reached the maximum, the previously-mentioned defects came into prominence, and these, together with the reduction of the amount of government loans to the I.A.O.S. and the critical attitude toward the banks, started the decrease in the number of the banks.

In 1914, a Departmental Committee was appointed to investigate the subject of agricultural credit in Ireland, but on account of the war and the pressure of work in many directions, the Department of Agriculture has been unable to give full consideration to the recommendations of that committee. Among the most important improvements required are the extension of the period for which loans may be granted and the increase of the maximum amount of the loan, which at present is £10, an amount insufficient to meet the needs of agricultural borrowers.

In addition to the foregoing credit institutions, there are various systems by which State credit has been afforded to tenant farmers in Ireland to enable them to purchase their holdings. The earliest form of land purchase credit was the advance of money to the tenant farmer to enable him to pay the purchase price to the landlord. This system was introduced by the Irish Church Act of 1869, and its terms were subsequently extended to apply to ordinary holdings. It has been maintained side by side with the system of purchasing estates and re-selling them to the tenants under the Acts of 1903 and 1909.

In the case of sales of land made directly by the landlord to the tenant, the advances include:

(*a*) Advances made by the Land Commission under Acts of 1891 to 1903. The whole of the purchase money is advanced; it is paid to the landlord in cash and repaid by the tenant in annuities at the rate of 3¼% for 68½ years.

(*b*) Advances made by the Land Commission under the Acts of 1891 to 1909. The purchase money is paid to the landlord in Guaranteed Stock bearing interest at 3%. The advances are repayable by the tenant in annuities at the rate of 3½% for 68½ years.

(*c*) Advances made by the Estates Commissioners under the Act of 1903. In the earlier transactions under this head the purchase money was advanced in cash, but by the Act of 1909 authority was given to make the advances, in the case of agreements pending at the time the Act was passed, in guaranteed 2¾% stock if the vendor would agree to this. The advances are repayable by 3¼% annuities in a period of 68½ years.

(*d*) Advances made by the Estates Commissioners under the Act of 1909. The purchase money is paid in guaranteed 3% stock, and is repayable by 3½% annuities in 68½ years.

Under the two latter systems large amounts have been advanced for the direct purchase of land.

Besides the method of direct purchase by the tenant from the landlord, there is also the purchase, by the Estates Commissioners, of land directly from the landlord for re-sale to tenants. If this is carried out under the Act of 1903 the purchase money is paid in cash and is repayable by the tenant in 3¼% annuities; if under the Act of 1909, the advances are in guaranteed 3% stock and are repayable in 3½% annuities.

There are also other means by which tenants may become owners of their lands, such as by purchases of bankrupt estates arranged directly by the Land Judge's Court between the landlord and the tenant, or, in other cases, arranged indirectly through the Estates Commissioners. Small amounts of land are purchased by the Congested Districts Board and resold, after improvement, to the tenants.

By these and a few minor means, large amounts of land have been transferred from landlords to tenants. The following figures give the approximate results:

Up to March 31, 1917, the total direct sales between landlords and tenants amounted to 7,771,000 acres, and the purchase price was £83,750,000, of which there was advanced £82,178,000.

Up to March 31, 1917, total amount of estates purchased for re-sale to tenants amounted to 2,495,000 acres, and the purchase price was £16,567,000, of which the amount of advances was £16,455,000.

FRANCE.

In France the co-operative credit appeals of the people have been met very largely by the state. At the head of the system is the Bank of France, below which are regional banks which include the local mutual banks of the district. The local banks in each district are generally organized on a basis of unlimited liability, though liability limited to two, three or four times the nominal value of the shares of each member is permissible. Each member, upon joining the local bank, must subscribe for two or more shares of four dollars each, of which one dollar must be paid at the start. Each society in a region then turns over the whole of its capital to the regional bank, which in turn advances to the local the necessary state funds obtained from the Bank of France at 2%, and the local loans to its members at 3½% to 4%, in sums not exceeding $1,600 to any one borrower. It must be understood that we are speaking of pre-war days, for present figures are not available. In 1910 there were in operation 3,338 such local banks with a membership of 151,621, and for their requirements the state had placed at the disposal of the Bank of France the sum of $8,000,000.

No association may receive a loan unless made up entirely of farmers. The regional bank is held responsible for the loan and its proper use. If the loan is made for the purchase or improvement of land, a first mortgage must be given to the bank. The long-term loans to individuals provided for by the law of 1910 are also granted out of funds obtained from the Bank of France, and are administered by and through this system.

Apart from these there are the Raiffeisen-Durand banks, eight in number, co-operative in character, but receiving no state aid. These have a decidedly religious bent, being exclusively Roman Catholic. Loans are granted only to members for definite purposes, either on personal or realty security and for short or long-term period, from funds obtained through savings deposits.

The great non-co-operative institution of France is the Crédit Foncier, a limited liability company, organized in 1852. It has a capital of $40,0000,000.

and may issue bonds to the extent of its loans. These bonds are of two kinds, those made on mortgages and those made to municipalities and public institutions, and they are a popular investment in France. The regulations for the transaction of its business are very strict. Short-term mortgages are taken, but most of its business is the granting of long-term loans from ten to twenty-five years, which may be liquidated on the amortization plan.

ITALY.

The honor of establishing co-operative credit societies in Italy is due to Luzzatti and Wollemborg, two illustrious Jews, whose unselfish work has been rendered doubly effective by the sympathy and support of the Catholic Church and the State. When they began their work, the laborers and farmers of that country were sorely oppressed by the extortionate demands of the money-lenders and the landlords. Interest rates had reached the highest point on record, and supplies had to be bought at ruinous prices. Aroused by the sight of such wrongs, Luzzatti, in 1864, went to Germany to study co-operation. Two years later he opened at Milan the first co-operative credit bank in Italy. It was started with a capital of only $140, of which $20 was given by himself. In so doing he became the largest shareholder. From that beginning the People's Bank at Milan has grown to be one of the largest moneyed institutions in Italy. In 1909 it had 24,774 members and a capital of $1,923,910, in ten dollar shares; a reserve of $961,955; savings deposits of $32,729,874; and a business turnover amounting to $535,693,455.

Besides rising to such distinction, this People's Bank has served as a model for 735 similar institutions throughout Italy, with a membership in 1908 of 501,022, deposits of $200,000,000 and a turnover exceeding $320,000,000, much of which was represented in loans to farmers.

One of the main differences between these and the German societies is that these were organized and have prospered on the limited liability plan.

Through the whole of Italy, in 1913, there were at least 2,094 rural credit associations, one-third of which were non-sectarian and the rest Catholic. The former are not consolidated into any system, although about 300 of them belong to the national federation of rural credit societies, the sole object of which is to encourage the development, increase the numbers, and promote and protect the interests of these societies by means adapted to their requirements. The Catholic rural credit societies are mostly grouped in diocesan unions and united in the national federation of Catholic rural credit societies, which was organized in 1909. A large number of them do co-operative buying for members, and there is a greater tendency toward share capital than in the case of the non-sectarian associations. Otherwise there is little to distinguish the two, except that all members and officers of the one class are of the Catholic faith.

GERMANY.

In describing the conditions in Germany we must confine our statements to the period before the war, for of the facts of the present we know nothing relative to that country.

Germany was probably the first country to develop a system of rural credits, and in its organization and its adaptability to the needs of the people this system has stood unrivalled. It has been the subject of study by other people who have used it as a model for similar institutions of their own. Of the 23 land mortgage credit associations in operation in 1913, six were founded in the period 1770-1790 and the remainder between 1825 and 1896, so that some societies have been in existence for more than 150 years.

Long-term Mortgage Credit.

Landowners in Germany, both large and small, were fortunate in the number and variety of agencies through which they could obtain long-term loans on relatively easy terms. These may be divided into three main classes, according to the purposes for which the loans were granted. In the first class there were four kinds of institutions, namely, the land mortgage credit institutions (Landschaften): the state, provincial and district mortgage credit banks; the joint stock mortgage banks, and the savings banks, all of which granted mortgage credit from one-half to two-thirds of the appraised value of the property, without requiring any declaration as to the purpose of the loan. The second group comprised the land improvement funds, land improvement annuity banks, and Imperial insurance institutions, which granted loans mainly for specific land improvement or building undertakings. The third group comprised the rent charge banks, which loaned for the erection and equipment of small holdings. The first was by far the most important class, having, in 1913, loans granted on landed property to the extent of nearly $5,000,000,000.

With the exception of the savings banks and the relatively unimportant land improvement funds, all these associations obtained funds mainly by the issue of land mortgage bonds. The bonds of each institution were backed by the collective mortgages held by it, and by its reserve and sinking funds. Except the joint stock mortgage banks, they were non-profit-seeking institutions, and usually had no share capital.

The Prussian associations limited their operations to a single province. The other German state associations usually operated over their respective states. These ranked as public corporations, subject to state supervision through a royal commissioner, and their articles of association required the sanction of the Crown or the Minister of Agriculture. Local representation was a cardinal principle of these associations. None but borrowers were members, and membership ceased with the payment of the mortgage. The preliminary charges were always low and well-established institutions often made none. Administration charges, too, were small; and as the officers usually served without pay, a margin of less than one-half of one per cent. was ordinarily sufficient to pay the running expenses. Cheap and proper safeguards for loans were secured by the fact that the members were familiar with the circumstances of the borrowers; and self-interest was a sufficient incentive to prevent any unwise loan or to notify the board of any unwise use to which the money was being put.

Short-term Credit.

The short-term rural credit system was elaborate, comprising central agricultural co-operative banks with headquarters in Berlin, state institutions organized by provinces or states operating over a limited territory, and, tributary to these, there were about 17,000 local co-operative savings and rural credit societies, with a membership, in 1910, of 1,417,766, representing one-sixth of the agricultural population of Germany.

The whole scheme was designed to accommodate as far as possible the borrower in any community from the deposits of that community. These local rural credit societies derived 90% of their working capital from the deposits of members and non-members residing in their locality. The success of these societies was remarkable. It has been stated on the best authority that their depositors never suffered any loss. They made a special effort to induce savings among the rural classes, they paid 3% to 4% on deposits and loaned these to members at 4% to 5%.

These rural credit societies, or Raiffeisen banks as they have been called, after the name of the founder, had some very distinctive features, among which we may mention:

1. Unlimited liability.
2. Limitation of the area over which they carried on their work, so as to secure mutual personal knowledge regarding each member.
3. Loans made only to members and for productive purposes.
4. Absence of profit seeking.
5. Dividends paid were usually limited to the rate of interest paid by borrowers.
6. Office holders, except the secretary, usually served without pay.
7. The promotion of thrift, honesty and, generally, the moral and material well-being of the members.

The very fact that these rural credit societies flourished so greatly in competition with the great joint stock banks with their numerous agencies, and with over 200 small joint stock banks, 1,200 urban co-operative banks and 1,000 to 6,000 private banking institutions, shows unmistakably that they satisfied a great requirement of the economic life.

The capital of these societies in 1910 amounted to $1,310,000,000, while that of the central banks aggregated $2,520,000,000. In comparison with this we may note that, in 1913, for the furnishing of long-term loans, there were institutions which had outstanding loans amounting to $4,975,000,000.

UNITED STATES.

About 1910 a strong movement was started in the United States for the improvement of credit facilities in rural districts, and it became a national issue in 1912. On Oct. 11 of that year the United States Government published Herrick's preliminary report on land and agricultural credit in Europe, compiled at Paris while he was American Ambassador to France. President Taft most warmly approved its recommendations, and President Wilson proclaimed his advocacy of the rural credit movement in his inaugural address, March 4th, 1913. During the same year two commissions from the United States visited Europe. Along with one of these commissions were seven delegates representing the four Canadian Provinces of Nova Scotia, Ontario, Saskatchewan and Alberta.

Following their report, legislation in the United States took form in The Federal Farm Loan Act, 1916, under the provisions of which there was established in the Treasury Department at Washington The Federal Farm Loans Bureau, under the supervision of The Federal Farm Loan Board, composed of five members, including the Secretary of the Treasury. The other four members were appointed by the President of the United States, one of them being known as the Farm Loan Commissioner. Under the supervision of this board the whole United States is divided into twelve Federal Land Bank districts with a Federal Land Bank in each district. Each bank has a subscribed capital of $750,000.00 in five dollar shares, mostly contributed at first by the United States Treasury. Under, and in affiliation with, this land bank, the farmers form local "National Farm Loan Associations" of borrowers. Each borrower must subscribe for stock in the Federal Land Bank (through his local association) to the extent of 5% of the amount of his own loan and no more. He can borrow from $100.00 to $10,000.00, and must pay his stock subscription when the loan is granted.

Loans are secured by first mortgages on the land of the borrowers, and must not exceed one-half of the value thereof and 20% of the value of the improvements, which must be kept insured. The proceeds of a loan must be used for paying for the land and for productive purposes. Mortgage loans are taken for five to forty years and are paid off on the amortization plan, with the further provision that the borrower can pay all or any portion of the loan at the end of five years, or at the expiration of any year thereafter. The interest rate must not exceed 6% (now 5½%). The borrower's stock earns dividends during the term of the loan. When the mortgage is paid the stock is redeemed at par and retired.

Each district Federal Land Bank has power under the approval of the Federal Farm Loan Board:

1. To issue and sell farm loan bonds, of the kind authorized under the Act; to buy the same for its own account, and retire the same at or before maturity.

2. To invest such funds as may be in its possession in the purchase of first mortgages on farm lands situated within its own Federal Land Bank district.

3. To receive and deposit in trust, with the farm registrar of the district, to be by him held as collateral security for farm loan bonds, first mortgages upon farm lands under the Act; and to empower National Farm Loan Associations to collect and pay to the said land banks the dues, interest, amortization instalments, etc., under the terms of the mortgages and the loans secured thereby.

The whole business is under the strict supervision of the Federal Farm Loan Board.

Between 1917 and June 30th, 1920, thousands of farmers have taken advantage of the provisions of the Act. Some local associations have over 200 members, and have obtained over $500,000.00 in mortgages. In all, up to the above date, $518,000,000.00 has been loaned upon farm mortgages. The work under the Act is at present held up through litigation on the part of the Farm Mortgage Bankers' Association of the United States, which has disputed the constitutionality of the legislation.

Province of Quebec.

In the whole history of mutual savings and co-operative credit movements there is no country where these have attained a higher degree of perfection than in our sister Province of Quebec, as outlined in a brief account of the operations of "The Co-operative People's Bank," by a Canadian, M. Alphonse Desjardins, who is correctly termed "The founder of co-operative banking on the American Continent."

To avoid possible confusion, it may be well to state that the Co-operative People's Banks of Quebec, the People's Banks of Italy, the Co-operative Credit Associations of Germany and other European countries, while differing in many details (chiefly in respect to the liability of members), are essentially alike, in that they are co-operative agencies which encourage community service, stimulate thrift, and put at the disposal of the honest and industrious, for beneficial purposes, those funds which they have accumulated, and which, through their combined credit, they have obtained from other sources.

M. Desjardins was born in 1854 at Levis, Quebec, and was educated at Levis College. He was a journalist by profession, but gradually became interested in the problem of usury, through frequent references to it in the press, and more particularly in the deplorable revelations brought to light by lawsuits in Montreal, where poor borrowers had been obliged to pay infamous rates of interest for very small loans. For twenty years he studied the co-operative credit associations of Europe, familiarizing himself with the history of their growth and development. Forcibly struck with the meagre borrowing resources of the poor, and realizing that they have the same economic needs as in the past, after studying the habits, surroundings and necessities of his fellow Canadians, he at last succeeded in evolving a new type of People's Bank. Its two guiding principles are to inculcate a spirit of thrift, and to give credit. In every case the good character of the borrower is the first security required. Each society is confined to a small area and a small membership, for the reason that its members are known to each other, and it is the stable portion of the community it seeks to benefit.

Who should be members? Everybody who is honest, sober, industrious and loyal to the institution—men, women and children. Money is a secondary, not a primary, consideration; because a People's Bank is, above all, an institution aiming at the betterment of its members rather than mere profits—an association of honest individuals rather than one of mere funds, like a joint stock company. If money were the first consideration, the institution would be deprived of its genuinely social character. Being above all a sort of manufactory, where capital is turned out by the spirit of thrift, not a reservoir of funds already accumulated and looking for a good investment, this bank aims, primarily, to serve all the people, not those who look only for large returns on their investment. Easy of access, it is an ideal institution in the restricted area in which it operates. By its family nature it invites husband, wife and members of the family to put in their savings individually, however small—a striking recognition of the children—accepting the pennies of the poor and not refusing the dollars of the well-to-do. It thus recognizes, encourages and teaches the boys and girls to take the places of their fathers and mothers in new homes in future years, enabling them the better to fulfil their duty as true citizens, in the home and to the state.

Funds.

Funds are secured by savings deposits and by five-dollar shares subscribed by members, either of which may be withdrawn at any time. The whole system is voluntary, with no provision for either limited or unlimited liability, although it goes without saying that if any officers were found guilty of fraud they would be punishable by law. Confidence is the great basis of security.

Management.

Officers are elected at the annual meeting of shareholders, each of whom has but one vote. There are three committees—a Board of Administration, with five to nine members; a Credit Committee of three members, and a Board of Supervision. The manager, who is the only paid officer, is chosen by the Board of Administration.

Reserve Fund.

A Co-operative People's Bank must lay aside yearly at least 10% of its net surplus as a reserve fund, until the latter amounts to at least double the liabilities represented at any time by the members' shares and the deposits. To encourage the perpetuation of the society the law prescribes that, in case it ceases to operate, the reserve fund must go to some purpose of public utility to be designated by the Lieutenant-Governor in Council. The loans are for both short and long-term credits. A most remarkable fact that deserves special emphasis is that after years of experience with from one to one hundred and fifty of these banks in the Province of Quebec not one cent has ever been lost on their loans.

MANITOBA.

The Government of Manitoba through legislation has met the long and short-term credit requirements of the farmers of that province by the passage of two separate Acts.

Long-Term Mortgage Credit.

Under the provisions of the Manitoba Farm Loans Act, 1917, there was established the Manitoba Farm Loans Association, with an initial capital stock of $1,000,000.00 in five-dollar shares, to be administered and managed by a board of five members to be known as the Manitoba Farm Loans Board, appointed by the Lieutenant-Governor in Council. One member is to be known as the Farm Loans Commissioner.

Any person desiring to obtain a mortgage loan must apply to the Board and subscribe for shares in the capital stock of the Association to the amount of five per cent. of his proposed loan. This stock is to be redeemed at par when the loan is repaid. All mortgage loans are secured by first mortgages upon the lands of the borrowers, and must not exceed 50% of the value of the property. Loans are made for acquiring land for agricultural purposes, for clearing and draining, for erection of buildings, for purchasing live stock and for other productive purposes. The loan is granted for a 30-year period, to be paid off on the amortization plan, and with the further privilege that the borrower is allowed to pay all or any portion of the loan at the end of five years, or at the expiration of any year thereafter.

To obtain the necessary additional funds to carry on the business of the Association, the Board is empowered to issue and sell 5% bonds on the security of its first mortgages and guaranteed by the Government of Manitoba. It is also empowered to solicit and receive cash deposits repayable on demand which will bear 4% interest. Both interest and principal of such deposits are also guaranteed by the Government of the Province.

The Manitoba Farm Loans Association has already firmly established its position as a necessary and practical business organization. During the first 21 months of its operation it made 760 first mortgage loans, aggregating over $2,000,000.00, to the farmers of the Province.

Short-Term Rural Credits.

During the same session the Legislature enacted the Rural Credits Act, under the terms of which the farmers in any municipality or locality within the Province may organize themselves into a Rural Credit Society, through the medium of which they may obtain short-term credits on favorable terms. Any fifteen farmers desirous of so organizing may make application in the proper form to the Provincial Secretary and, when their application has been accepted, may at once proceed to organize the society.

No society can commence to do business until it has 35 farmers as members, each of whom subscribes for one hundred dollars' worth of capital stock and pays in $10.00. The Government and the Municipality in which the society is situated then each subscribes for one-half the amount of stock taken by the individual members. The society is managed by a board of nine directors, three elected by the individual subscribers, three by the Municipality and three by the Lieutenant-Governor in Council. Of the latter one must be an agricultural expert, and he is usually appointed on ten or more Rural Credit Society Boards in the locality, to ensure uniformity and thoroughness in the business of these societies. The Secretary-Treasurer, who is the manager of the society, is the only paid officer of the board; the others receive only their expenses. Loans are granted to worthy persons, for productive and necessary purposes, for short-term periods.

The boards of directors meet two or three times a year, usually in the early spring. Any member desiring a loan makes application to the Secretary, stating the purpose of the loan, and submits also a statement of his financial standing. If the application is approved he is granted a line of credit for a year. He can obtain any portion of the sum at any time upon his note, and may pay it back any time during the year with interest for the time he has the loan. When the Act was passed the Government arranged with the chartered banks to advance the amount of the loans to the borrowers, through the societies, under the joint guarantee of the society and the Government, at 6% per annum. The society charged its members an additional margin of 1% to defray expenses.

The scheme has been most successful. In 1919 38 Rural Credit Societies granted credits of $1,051,876.00 to its members, and the borrowers have met their obligations well.

These two means of supplying favorable lines of credit to the farmers of Manitoba have resulted in a great reduction of interest rates, not only to members, but to the farmers of the Province as a whole, and there are now 66 Rural Credit Societies in existence in the Province.

Everything went satisfactorily until February, 1920, when the chartered banks refused to advance any more funds at less than 6½%. These terms the Provincial Government and the societies refused to accept, and the Government itself, through the Provincial Treasurer, advanced to the societies for the needs of the present year $1,300,000.00.

The Legislature, being in session, at once enacted the necessary legislation for organizing the Province of Manitoba Savings Office, to receive deposits personally and by mail at 4% per annum, compounded half-yearly. These deposits are guaranteed by the Province of Manitoba both as to principal and interest. This new system of receiving savings deposits at 4% interest is meeting with a favorable response.

THE SOLUTION.

In view of the information herein presented of the remarkable results following the institution and operation of favorable systems of mutual savings and co-operative rural credit societies in the various countries of Continental Europe, and the further fact that in the Province of Ontario, apart from the commercial banks, which do not now, and under the present organization and system of regulation will never meet the necessities of the most needy section of our agricultural people, the question may well be asked, *How is this problem to be solved?* Again we must repeat—it is the ever recurrent experience that if the farmers of a country continue to leave the direction of their interests in the hands of other classes, those interests will be very largely exploited for the benefit of such classes. Experience teaches that the welfare of the people can best be secured by institutions organized and operated by the people. It is a social duty and a mark of true citizenship to take an interest in and aid community service.

The proper solution can best be reached by a calm study of the real characteristics and requirements of the people, both social and economic. Such a study at once reveals three striking sources of weakness in our rural conditions.

1. The entire absence of a suitable system of rural credit facilities, more particularly to those who really require such provision. These facilities are a necessity to the hard-working farmer and laboring man in straitened circumstances and struggling to meet his obligations. Not only would these be a boon to such, but there would be benefit to every business farmer and laboring man from having access to loanable resources at any time, under proper safeguards and upon favorable terms. Many a time these classes might use such facilities to advantage when, if the terms were not so favorable, they would allow the chance of securing such assistance to pass by.

2. The entire absence of a suitable reservoir of money to support a credit system for the loaning of funds. How can this be created? The answer is clear. Recall for a moment the immense deposits of the savings and rural credit societies of Italy and Germany: the 635 mutual savings banks of the New England and other States, which in 1911 had depositors to the number of 7,690,973 and deposits of $3,458,883,612.00. Consider that on the 30th June, 1920, there was on deposit in the chartered banks of Canada, yielding 3% upon minimum monthly balances, the sum of $1,243,000,000.00, and think of the possible fund that might soon be available if Provincial savings offices were opened, offering 4% interest on deposits, and with the latter guaranteed by the Government of Ontario.

3. A weak community spirit. We have grown entirely too individualistic. The social side of the life of the older sections of rural Ontario requires to be more keenly cultivated and developed.

This problem in Canada cannot be solved nationally. With such a continental stretch, and with such diversity in race, creed, character and social and economic environment, it must be dealt with in more limited areas. The facts of this report teach us that the Province of Manitoba, with 66 rural credit societies developed in the short space of three years, if it continues to make progress in the future to the same extent and in the same direction as at present, will place the people of that Province upon the very threshold of their own solution. Turn again to the good work and the wonderful results attained by the people of the Province of Quebec. Ontario citizens are altogether too prone to look upon these people as a rather primitive and somewhat benighted race. In the solution of this vital problem they furnish a striking object lesson to the rural classes of Ontario.

What will the establishment of a favorable system of mutual savings and co-operative rural credit societies do?

It will tend to nurture and develop the community spirit of our rural people, which is to-day one of the weakest characteristics in our whole social fabric. In the process of nourishing this community spirit, it will train them in the principles of business; train them to direct and look after their own interests, as one of the most important factors in the body politic; and, in the process of so doing, it will also provide them with the other two requirements, namely, the system of credit and the necessary reservoir from which such credit may be obtained. Through the workings of such a system it puts the savings of the people at the disposal of the people. It becomes a school of training, a school of business, a school of thrift, which every one can attend, helping through the spirit of enterprise and through the virtue of providence. It is this double character which caused Luzzatti, the illustrious founder of the Italian People's Banks, to say that these institutions are "perfected savings banks." From an economic point of view, they are the triumphant success of an honest and industrious democracy.

7. THE SOLUTION OF THE FARMERS' SHORT-TERM CREDITS.

Since the security which can be given for a loan is the most important determinant in the granting of the loan, and since both the amount and the rate of interest of the loan are dependent upon the security which can be offered for the payment of the interest and the repayment of the principal of the loan, the question of the security which the borrower can offer is the most vital consideration which must be taken into account in the making of a loan. In the case of a loan made to a commercial or industrial concern upon a note which runs for, say, two months, the loan is secured by the credit of the borrower as well as by collateral security which can be readily sold in order to make good any possible default in the payment of the note when due. But, in the case of the farmer, if his name affixed to his note is not ample assurance that the loan will be repaid at the period of maturity, he has frequently no other security which would satisfy the requirements of the commercial bank from which he obtained the loan. He could not offer the bank, in the hope that the latter would accept unhesitatingly as collateral security for the loan, a lien upon his growing crop or a chattel mortgage upon his stock or any other forms of his working capital, for these would not be readily saleable under all conditions, and, consequently, the bank's funds would be tied up in investments upon which it could not be sure of realizing at any time. This would be contrary to the law and the time-attested practice of the chartered banks.

It is evident, therefore, that some other kind of security is essential if farmers as a class are to be able to borrow upon terms which are acceptable to the lender. As we have shown in earlier sections of this report, when describing the systems of Germany, France, Italy, Manitoba, etc., experience has proved that the best solution for this inadequate individual credit is collective or co-operative credit. The borrowers in any community ally their interests by the formation of a rural credit society and the repayment of the amount borrowed by any individual member of the society is guaranteed by the society itself. This introduces the collective liability of the organization behind the individual responsibility for the repayment of a loan. With a society composed of thirty to one hundred members, many of whom have large amounts of fixed capital and of other tangible assets, it is almost inconceivable that the group liability should ever fail: in fact, it would seem as if this were about as perfect a security as could be desired. By this means, then, the most vital element to be considered in the granting of a loan, namely, the security, has been brought to the highest point attainable through this combined responsibility for the loan, and we should naturally expect that under these circumstances, with the risk reduced almost to *nil*, the borrower would be able to secure his advances at a low rate of interest—much lower than in the case of individual liability. In the latter instance there are many factors which cause a large measure of risk, for the particular circumstances, either personal or material, may change overnight; but with collective responsibility there is the elimination of any risks attending the individual.

Having the security, then, of undoubted strength, how should the farmer obtain his short-term loans on the basis of this security?

Through his rural credit society he may approach the chartered banks, and, with his unquestionable security, expect favorable action from them.

But, strange as it may seem, the officials of the Canadian Bankers' Association have stated to us that they do not see how they could be more liberal to borrowers organized into a rural credit society with collective liability than they are now to individual borrowers.

Moreover, under the recognized practices of sound commercial banking in all countries, banks cannot loan for a period exceeding three months, although under favorable conditions they not infrequently renew a loan at the end of that time. The farmer, therefore, cannot be sure, when he gets a loan from the bank for three months, that he will be able to have it renewed at the expiration of that time. Consequently he hesitates to accept a loan from a bank under these terms, for he knows that a loan which does not extend beyond three months, so that it can be turned to productive account, is of little use to him.

We have already shown that the Canadian Bank Act is not favorable to the granting of loans to farmers, even if the bank managers were, as frequently they are, desirous of extending greater credit facilities to this class of borrowers. The banks cannot transcend the laws under which they are required to operate, and when these laws act to restrain them from loaning freely to farmers, notwithstanding the desire of many branch managers to do so, it is evident that farming operations are unduly hampered because of this fact. Like all others, bankers must live within the letter of the law, no matter what important interest may suffer by their so doing. We are sometimes told that the farmers get all the credit to which they are entitled. It scarcely seems possible that reasonable men should make such a statement, when they know that the Bank Act forbids the granting of loans to farmers under the favorable conditions on which they are made to business men, and when those branch bank managers who are in closest touch with the farmers recognize the necessity of the agricultural classes receiving loans upon a more acceptable basis.

If, then, the banks are not allowed to make loans to farmers except in a few special cases, we must look elsewhere for the funds which are required to meet the farmers' demands for loans. To what source shall we turn? In Canada there is no other financial institution which is in the position to make such short-term advances as are regularly required. It is true that in the Province of Ontario we have at least one loan company which recognizes that in return for the use of large amounts of savings deposits received from the farmers in that vicinity its first duty is to these farmers; and this company is loaning these savings deposits to the farmer depositors at rates which but slightly exceed that paid on the deposits. But this is so exceptional that we may dismiss it with the mention of it. The fact is that the loan companies are not allowed to fulfil the functions of a bank, although there is a borderland between the two kinds of institution in which the loan companies may slightly encroach upon a certain part of the field of banking and still remain within their own domain.

It would seem, therefore, from what we have just said, that we shall have to create a new institution for furnishing these short-term advances to farmers. It would be natural that the savings of the farmers as a class should be used primarily to finance the farmers; that the surplus funds of some should be used to take care of the needs of others. No valid objection could be raised to such a policy. If the farmers as a class wished to go into the field of banking in order to carry on an institution which would provide more adequately for their financial necessities, it seems as if there could be no impropriety in such a course. Each class to-day is permitted to carry on its work and make provision for its protection and its needs upon the basis of enlightened self-interest.

And, briefly, this is what we propose as a means of caring for the short-term requirements of agriculture. There should be established with private capital a savings institution. This could not be called a savings bank, for the Bank Act has prevented any other institution than a chartered bank from using the name "bank," but it could perform the functions of a savings bank in all essential respects. This savings institution would have power to receive on deposit the savings of farmers and others and to pay interest on these savings at the rate of four per cent. per annum. They would be guaranteed by the Provincial Government, and the depositors would have the same right of withdrawing any part or the whole of their savings as they now have in connection with their savings account in a chartered bank. Under this system the depositor could invest his funds at four per cent. interest and have the security of the Government that he would be able to get them at any time when he needed them. From the large amounts of money which are held by the banks in savings accounts, it is indubitable that this savings institution, by paying four per cent., whereas the banks are paying but three or occasionally three and one-half per cent., would soon have a large volume of savings for investment purposes. An increase of the interest rate of 33⅓% would certainly draw forth savings from a great variety of sources, especially when, with the Government guarantee, there would be absolutely no chance of failure. The way should be left open so that anyone with funds for deposit could secure the advantage of this favorable rate of interest. Out of these savings, which would almost certainly pour into this institution when once its benefits were realized, all the demands for farmers' short-term loans could be fully met, at a rate of five or not more than five and one-half per cent.

In the granting of these short-term loans the work of the rural credit societies would be of the highest importance. We have already shown the organization of such societies in the Province of Manitoba and have made clear the fact that the persons who can most satisfactorily determine whether a farmer can use a loan successfully are those who are intimately acquainted with him through close contact at all times. They know his character, his veracity, his honesty, his ability as a farmer, his promptness in meeting his obligations, the value of his stock, implements, machinery, buildings, etc.; in fact, they know every important detail concerning him which should be taken into consideration in deciding as to whether he should get a loan or not. In this respect they are in an entirely different position from that of a local branch bank manager, who in most cases has no contact with the farmers, and, therefore, cannot know to whom he should make loans. As in the Manitoba system, our rural credit societies should be so constituted that all the loans of their members would have to be passed upon by the Board of Directors of the society in which the applicant was a member. The final authority for the granting of a loan would rest with the Board. If a member applied for a loan of, say, $800 for the year, and the Board, after careful consideration, decided that he could not use $800, but could use $500 safely for the purposes specified, they might approve his loan for that amount, and if after being shown the reasons for this reduction the applicant were willing to accede thereto he would make out a new application for a loan of $500, which would be approved by the Board. After each application for a loan had been thus acted upon deliberately, those loans which were approved would be handed on to the savings institution from which the loan would come. The approval of these loans by the Board of Directors of the rural credit society would constitute a guarantee on the part of the society for the repayment of the loan. The only responsibility, therefore, on the part of the savings institution would be to see that the individual got his credit to the amount approved by the Board.

We would suggest that the organization of the rural credit societies in this Province should be different from that in Manitoba. In the latter, as we have already described, one-half of the capital stock of the society is subscribed by the farmers, one-quarter of it is taken by the municipality, and the remaining one-quarter is taken by the Provincial Government. We are firmly convinced that in Ontario all the stock of a society should be held by the farmer shareholders. Our object in making this change would be to keep the society clear of any complication with the Government or with the municipality, and *vice versa*. The society is an economic, not a political, unit; it is formed to further the interests of the farmers in their short-term borrowing, and the injection of even the appearance of politics would tend to disrupt the society and turn it from its primary economic purpose. Moreover, if the Government had to take one-fourth of the capital stock of each society formed, it is not difficult to see that when these societies begin to multiply largely, as they are very likely to do, the Government would have a large sum tied up unproductively in these organizations.

Then another change from the Manitoba system which we recommend for Ontario is in regard to the composition of the Board of Directors of the rural credit society. The reader will remember that in Manitoba each Board is composed of nine members, three chosen by the farmers, three by the Government, and three by the municipal council. We suggest that of the nine members of an Ontario rural credit society's Board, six should be chosen by the farmers and the other three by such organizations or associations as are best calculated to understand and to promote the welfare of the agricultural interests. This will keep the control of the society in the hands of the duly elected representatives of the farmers, and yet will secure, through the presence of the other three members of the Board, men of good ability, of permanent interest, and with a wider viewpoint than that of the local community.

The savings institution, which would be located in Toronto, would be able to accumulate its deposits through the societies throughout the Province, as well as by other means which will be familiar to those who have a knowledge of our banking practices. But how will this savings institution arrange that loans which have been approved by Boards of Directors of societies shall be made available to the borrowers, since it has not the regular powers of a bank? Without committing ourselves to a final policy, we may suggest how this might be done. The institution, like any other business concern, might keep on deposit with one or more of the chartered banks in Toronto a suitable balance, upon which it would be reasonable to expect the same rate of interest as our proposed savings institution would allow on deposits. When it desired to place, say, $500 to the credit of a farmer near the village of "X," it would request its bank in Toronto to notify its branch in that village to give this particular farmer a line of credit up to $500. The farmer would then be able to get the funds just as he needed them, and would not be required to pay interest on any more funds than he was actually using. The balances would be settled through the clearing house, just as is done at the present time.

8. THE SOLUTION OF THE FARMERS' LONG-TERM CREDITS.

We have shown that most of the mortgage loans now made to farmers in Ontario are granted by private individuals, and that so far as this Province is concerned the mortgage investment companies need not be considered. We have have also shown that while the system of private mortgagees has some advantages it cannot be relied upon as a provincial method of meeting the situation with any assurance of success.

There remain, therefore, certain other possibilities, which we must now discuss.

One means of providing for long-term or mortgage credits would be by having the Government furnish the money and administer the system of loans directly, probably through the Provincial Treasurer's Department. This would be a simple method of satisfying the requirements. The Government could use part of its regular revenue for this purpose, or, if necessary, could secure funds through the sale of its bonds. Then these funds could be applied to meet the wants of those who desired to borrow for long terms. The Government would send an appraiser to value the land of the applicant for the loan, and then it could decide as to what amount it should advance upon the mortgage security. At the present time the Soldier Settlement Board makes loans to returned soldiers up to ninety per cent. of the value of the lands they occupy, and this policy has been suggested, especially by some in New Ontario, as the best means of meeting the settlers' needs.

We are not prepared to recommend any such system as this, for the following reasons:—

1. The financial burdens of the Province after the Great War are already very heavy, and will be so, in all probability, for many years to come. Anything, therefore, which will add to these burdens unnecessarily, except as an emergency, cannot be seriously entertained.

2. The introduction of the Government into business which can be conducted successfully for all parties by private capital leads to complications which in many cases must be deplored. In this case, we fear that undue pressure would be brought to bear upon the Government in the granting of loans. The tendency would be, in the case of most governments, to grant better terms to their political supporters than to their opponents, and this trafficking in loans by men who were seeking political offices or preferment would lead to abuses of many kinds. For instance, some who were desirous of a seat in Parliament would be very likely to offer to use their influence to secure for farmers larger loans than would be safe, in return for the farmers' votes. And who can doubt that this would be a potent appeal, especially to many who now find trouble in financing their enterprises!

3. Even were there no political objections to this policy, it is open to the charge that there would probably be too much "red tape" in its administration. If, as a result of the Government's desire to safeguard the system, the latter became clogged with a multiplicity of obstructionist details, so that the man who needed a loan at a particular time could not get it until some weeks or months after the need had passed, it requires no imagination to see the early termination of the usefulness of a well-meant project.

The foregoing reasons, and others which will occur to anyone familiar with governmental machinery, are sufficient to create an effective barrier to the introduction of the Government directly into the farm loan business.

But if direct action by the Government is not desirable, there is the possibility that the Government could provide the funds for loaning and leave the administration of the system in the hands of a properly constituted board. This is the method which has been adopted, for instance, in Manitoba and in the State of South Dakota, and, apparently, with some success in each case. Like the preceding policy, this, too, would enable the farmers to get their loans at the lowest rate of interest obtainable in the money market, for the Government would be able to borrow its funds at a lower rate than an ordinary mortgage or loan company, and, consequently, could give it to the farmers at a lower rate than could such a company.

But most of the reasons against the first method will hold good here also. Even though the Government did not put the system into operation directly, but, as here, indirectly, there would always be the danger that this board, being appointed by the Government of the day, would partake of the nature of a political institution, and would be subject to all the uncertainties pertaining to such appointments. In handling such important business as these long loans there should be an institution with as much stability of policy and personnel as possible, and this would be difficult of attainment through a managing board composed of political appointees.

Since, then, it is unwise to have the Government assume the active direction of a system of farm loans, we come back to the desirability of having the business managed by a private institution. This brings to the foreground the policy which we have elaborated for taking care of the business of long-term farm loans.

We propose the organization of a land mortgage bank (we shall use this name for the sake of convenience in this report) to act in conjunction with the rural credit societies. This bank should have a capital stock of $500,000, subscribed and taken by farmers, and payable in instalments of about twenty-five per cent. When one-half of the stock has been paid in, the bank is ready to commence operations. The applications for long loans are passed upon, in the same way as those for short loans, by the directors of the rural credit societies, and their approval of the loans is handed on to the land mortgage bank in Toronto. Before the bank can grant a loan it must satisfy itself that the valuation of the applicant's land and improvements, as made by the directors of the rural credit society, is safe and conservative, and, therefore, it sends an expert appraiser to make an independent valuation. Besides making the valuation, he answers certain important questions regarding the applicant, his farming methods, his soil, etc.: in fact, he gives his estimate of the whole situation as he has "sized it up," and states whether he is satisfied that the combination of the personal and material factors is such a risk as the bank would be warranted in assuming. The appraiser's report is attached to that of the directors of the rural credit society and the application, and the whole matter is referred to the directors of the land mortgage bank for final action. If the security is satisfactory and the character and ability of the applicant is unquestionable, there will be no hesitation in granting the loan. The applicant will have to furnish a clear title to the land and execute a first mortgage in favor of the land bank. These two documents would be retained by the bank or by a trustee, and the applicant would receive the amount of the loan for which he had made request.

As soon as the land mortgage bank had issued loans out of its paid-up capital to the extent of, say, $75,000-$100,000, it could then mass these mortgages, and upon that security could put out a series of debentures which could be sold to investors (farmers or others), and the funds obtained from the sale of these debentures could be used to make further loans upon first mortgages on other farm lands. As soon as additional loans had been made to the extent of $75,000-$100,000, another series of debentures could be issued in the same way as the first. These debentures, with the Government guarantee, could be sold, say, on a 6% basis, and the bank could give the farmers their loans at 7%, the one per cent. spread being sufficient to provide for all the expenses of the bank. They should be issued in such a way that they could be called in and redeemed as the farmers' payments were made, and the time in each case should be fixed so as to correspond very closely, thus avoiding as much as possible any temporary financing to utilize the bank's periodically accruing income.

It is not anticipated, however, that during the continuance of the present disturbed condition of the money market, when interest rates are so high, there will be any great development of the mortgage loan business; not until the long-term rate is reduced below 7% will farmers undertake on any great scale to secure the advantages from the use of mortgage credit.

These loans should be made, for periods of five to thirty years, on the amortization principle, requiring the borrower to pay the interest and a small percentage of the principal of the loan every year; but provision should be made that the borrower could pay off all or any part of the principal on any interest date after five years. In certain cases it might be desirable to arrange the loan so that the borrower would not need to pay anything for two years, so as to allow him to get started, and after that his payments of interest and principal would begin.

The longer the period over which the loan extends, the smaller would be the annual payment on the principal; in this way provision would be made for the farmer who is just beginning or who is working under many difficulties, and, at the same time, the stipulation that he can pay off his loan as fast as he is able makes satisfactory arrangement for the later years when he has become more prosperous.

We cannot emphasize too strongly the advantage of this long-term financing. When the farmer has made his financial arrangements for perhaps twenty-five years, he then has something upon which he can calculate. There is nothing uncertain here. He knows that he does not have to save every cent in order to pay up a loan made for only five years. He can, therefore, embark upon the best methods of farming of which he is capable, and can turn his ability as well as his land and capital to the best account for the long-run results. The payment of a definite amount each year enables him to arrange his affairs with a view to securing the highest productive efficiency. It enables him to plan for certain results years ahead. This is economy in the most real sense. It furnishes an incentive to turn personal ability, material assets and opportunity to the attainment of their most complete fulfilment.

The extent to which the land mortgage bank should make loans to individual farmers is a subject which should be decided with very great care. There are not a few people, some of them leaders in their respective communities, who think that under careful supervision the Government could loan many a farmer of good character up to 90% of the value of his land, as the Soldier Settlement Board is doing. Such a policy would enable young men, well qualified in other ways, but without much capital, to take up agriculture and become landowners in the shortest reasonable time. We would like to see the best chances given to such men: but we must consult safety first, and we cannot accede to any proposal like this. The land mortgage bank which we would establish is a private institution, and must not embark upon any course which is not dictated by prudent judgment. Under the legislation governing the companies which were formerly engaged in this business, loans are permitted to the extent of fifty per cent. of the value of the property. But in recent legislation in other countries it is being recognized that the value of the permanent improvements upon the land, as well as the value of the land itself, should be taken into consideration in determining how much may be loaned to a farmer; and it seems to be generally agreed that it is safe to loan up to fifty per cent. of the value of the land, plus twenty to thirty per cent. of the value of the permanent insured improvements. To this extent, then, we favor the granting of loans in Ontario. We are convinced that there should also be a minimum and a maximum to any individual loan, and we would fix the former at $500 and the latter at $12,000. One reason for setting this maximum is that the system of rural credits which we propose is intended to aid the actual farmer, not the dealer or speculator, and a limitation of the amount that can be loaned to any one farmer will serve to prevent the use of the legislation for the purpose of speculation in land or for buying up large blocks of land.

There are certain features of this land bank project which we desire now to discuss.

First. As to the amount of capital. It would be unwise to start with anything less than the above mentioned $500,000, for this institution would have to do business over the entire Province. With a smaller capital stock it would not have the financial strength that is necessary for doing such a volume of business as would be required, and its bond issues would not command as much confidence nor be so readily saleable. It may seem a large amount to require to be subscribed by farmers; but when we remember how largely this class bought Victory Bonds, and how, since the war, they have contributed to other enterprises which have been for their welfare, we cannot doubt that if they were shown clearly the advantages of this bank, and a strong campaign were inaugurated to get the stock subscribed, it would soon be an accomplished reality. In case it were necessary for the first year, in order to get the bank into operation, the Government could take the remainder of the unsubscribed stock until the full amount could be subscribed by farmers. This is to be an institution for the welfare, primarily, of the farmers, and we do not hesitate to believe that, recognizing its vast importance, the farmers would not allow it to fail of subscriptions. The farmers of New Ontario would obtain their loans in this way through the assistance of those in the older parts of the Province who have funds to invest in this institution, and thus there would be a clearly manifested solidarity of interests on the part of all who are engaged upon the land. It would be desirable also to have each rural credit society subscribe for a small amount of the stock of the land bank, for in this way there would be established a closeness of tie between these two organizations which would be for their mutual welfare.

Provision should be made that the capital stock of the bank might be increased from time to time as found necessary. There are so many possible and profitable extensions of the field of operation of the bank, which we need not mention here, that if some of these were to be undertaken it would be advisable to have the capital stock augmented to keep pace with the expansion of the bank's enterprise.

Second. As to dividends. The dividends payable on the stock of the land bank should be strictly limited by legislation. It is not the primary purpose of the bank to make profits for the stockholders, but to serve the interests of agriculture by furnishing long loans to farmers at the lowest possible rate of interest. It is necessary to have this principle impressed upon the organization from the first, and to have it so firmly fixed in the minds of the officials that it will be the spirit underlying all the activities of those who may be entrusted with the management. If this be not effected, there will be great danger that, subsequently, the stock and the control may get into the hands of men who, forgetting the original purpose, will use the institution for their own mercenary ends. There is no doubt that such a bank could be used, when well established, to turn large profits into the hands of the stockholders; but this must be scrupulously avoided in order that the object of its formation may not be defeated. The maximum dividend should be placed at seven per cent., for the following reasons:—

(1) Because that amount is needed as an inducement for a man to assume the risks of a stockholder by purchasing shares of the bank and thus contributing capital to the bank.

(2) Because this rate is on a par with rates which now prevail for preferred stock in safe and conservatively managed corporations.

(3) Six to six and one-half per cent. can be obtained from investments in the bonds of governments and municipalities which have no element of risk at all; but in this case there is a slight amount of risk at the first, and, consequently, the dividend rate must be a little higher than the interest rate on these bonds.

(4) The rate should not exceed this maximum, because otherwise it would tend to develop a speculative quality in the stock, which must be obviated. The bank is intended to keep the rate on its loans as low as possible and as uniform as possible, both as to time and locality, and every precaution must be taken to insure these results.

Third. As to reserve fund. This bank, being a fiduciary institution, must jealously guard its standing in the estimation of the public. Its financial status must be such as to command the confidence both of those who borrow from it and those who furnish its capital. Before declaring any dividend, therefore, it should make ample provision for a reserve fund, which will give a strength and a stability to it. With this end in view it should set aside to Reserve Fund account, out of its profits, semi-annually, 25% of its net earnings until the credit balance of this account should amount to 25% of the outstanding capital stock. If this fund should be drawn upon, so that it became impaired, the balance of 25% should be restored before the declaration of any dividend. After the Reserve Fund has reached the 25% of the outstanding stock, there should be added to it annually 5% of the net earnings of the bank. In this way, as the bank's operations expand its Reserve Fund would also increase.

In connection with this subject, we would say that it is desirable to limit the loaning power of the bank, at least during the early years of its existence, and to preserve its soundness, it should not be allowed to issue bonds beyond an amount which would be twenty times the sum of its capital and reserve.

Fourth. As to taxation of the land bank bonds. This is a very important matter. If the bonds were made tax-exempt they could be sold at a lower interest rate, and, consequently, the farmer could get his funds at a correspondingly lower rate. Then, too, this provision would cause the bonds to be more easily marketable, and there would be less difficulty in selling them, even in the present stringent money market. Now it is of the highest importance that the farmers should be able to get their loans at the lowest rate of interest, and the Government, if it wished, has power to make these bonds free from all taxation in the Province, in the same way as municipal and government bonds are tax-free. This was done in the United States in 1916, when the Federal Farm Loan system was established; but action was taken and a suit instituted, as we have already noted, by the Farm Mortgage Bankers' Association of America to test the constitutionality of the tax-exemption feature of the farm land bonds, and, as a result, that system has been for many months in a state of practical suspension. If there were a great emergency in the development of agriculture in Ontario, we should not hesitate to recommend that these bonds of the land mortgage bank should be made tax-exempt; but the situation does not seem sufficiently critical to demand such action. We may state our other reasons for leaving these bonds taxable:—

(1) There is at present among the farmers a strong sentiment in favor of equality of treatment for all and special favors to none, and they have been working for this end to the utmost of their power. With this principle so firmly ingrained among them, it is almost certain that they would never sanction the exemption of the land bank bonds from taxation.

(2) While we hope that the farmers would invest in these bonds and take the larger part of them, it is possible that the bonds might, either immediately or at a later time, get into the possession of corporations or of

men of wealth, who are continually seeking means of evading taxation. In this way, those firms or individuals who are most able to bear their share of the taxation burdens, would go scot free and those who were less able to bear taxation would have to contribute the more.

(3) There seems to be no necessity to make them tax-exempt, because in this Province there is no income tax; consequently since there would be no tax upon the income from the bonds, there is no need of having the latter specifically described as free from the income tax. This, of itself, would seem to be a sufficient reason; but we must remember that there is the Dominion income tax which would take its toll from those who derived income from these bonds. Even if the Provincial Government were to declare them tax-exempt, however, this would not exclude them from the Dominion system of taxation, since provincial legislation cannot override that of the Dominion.

If any change should be made in the provincial system through the introduction of the principle of the taxation of incomes, this particular source of income would then come up for special consideration. It is worthy of note here that the land bonds of the rural credit board of South Dakota and those of the Bank of North Dakota and of the State Land Board of Oregon, as well as the bonds issued by the Manitoba Farm Lands Board, and others which we might mention, are all tax-exempt. The advantage of this to the farmer in being able to get his loans at the lowest rate of interest need only be referred to.

An important subject closely related to the foregoing is: Should these bonds be freed from the operation of the provincial law concerning succession duties? While this has certain elements which are not the same as in the case of the income tax, our answer for this also would be in the negative.

Fifth. As to incorporation. The land mortgage bank should be incorporated under the Ontario Statutes, not those of the Dominion, for the following reasons, which we conceive to be valid:—

(1) The business to be undertaken is confined to the Province.

(2) No new legislation would be required if the charter were obtained from the Province, for the Ontario Trust Companies Act (Sec. 38) gives authority for all the powers which would be necessary for the land bank. But,

(3) On the other hand, the Dominion Trust Companies Act (Sec. 68) does not allow a company chartered under it to borrow money by the issue of debentures or bonds, which is one of the most valuable functions of the institution which we propose. Moreover, it limits the borrowing power within a much narrower range than we think necessary for the land bank, for under it the sum of the amount borrowed and the amount of funds entrusted to the company for investment must not exceed five times the sum of the company's unimpaired paid-up capital and reserve.

(4) The limited liability of the stockholder is provided for under the Ontario Statute as well as under that of the Dominion.

Sixth. As to the directors. This is the crucial point. In order that the land bank may be able to perform its highest service, the Board of Directors should be composed of men of large vision, of the greatest business ability, and of sympathetic interest in agriculture and all its problems. The issues which will have to be met by the directors of this bank will call for the exercise of the greatest business acumen and for a comprehensive grasp of the importance of agriculture in the national life. As agriculture is our greatest enterprise, it will require the best ability to direct the affairs and the policy of such a potent agent as the land bank, which is destined, if managed successfully, to place agriculture upon a distinctly higher plane, both as to its organization and its results. Too much care, therefore, cannot be taken in choosing the men who are to be entrusted with the development of the work of this bank. They should be men who will not seek to use their position for their own selfish ends, but who are magnanimous enough to work for the country's interests rather than for their own immediate profit, knowing that whatever effects beneficially the food-producing classes will soon bring indirect benefits to all other classes. We would suggest that this appeal should be made to men who have been successful in several different vocations. This is an opportunity, such as seldom comes, to do a great service for the advantage of the entire country, and we do not hesitate to believe that there would be a favorable response on the part of men whose qualifications as directors would assure the proper conduct of the bank from its inception. Perhaps it may not be amiss for us to suggest certain lines of enterprise from which directors might be drawn, if the right person in each line could be secured. There should be upon the board one man whose knowledge of the experience and practice of other countries in agricultural finance is thorough and comprehensive, who would be able to guard the board from going into courses which time and experience have shown to be erroneous; there should be the most capable farmer that is known in the Province: there should be a representative from either the grain trade or the live stock trade, or one from each of them; the farm implement industry and the automobile and motor truck industry should be represented; one of the most valuable men in the railway world should be secured, if possible, on account of the close connection of the railways with agriculture: one director each should be chosen from the banking, the mortgage and loan, and the bond investment business, because the land bank would have to solve many of the problems with which these men would be familiar, and, finally, it would be advantageous to have one director whose knowledge of the general business conditions throughout the country would make him a valuable asset to the board.

The foregoing gives in general outline the system which we believe is best adapted to provide long-term credits for farmers. It is in accordance with the principles which have been operative in moulding our national life thus far, and in the working out of which there has come great and enduring benefits. It relies upon private capital and individual initiative and enterprise. It avoids any participation of the Government in the conduct of business which can be carried on by private capital for the public welfare. It leaves to the Government its proper sphere, namely, that of regulation and supervision: for all the affairs of the bank would have to be subject to careful examination and audit by competent men, and regular reports would have to be made by the bank to the Government.

The operation of this system would give the farmer his loans at as low a rate of interest as if the money were given by the Government directly; for the land mortgage bank, with its bonds guaranteed by the Government, would be able to sell these bonds at as low a rate as that at which the Government could borrow upon its own bonds. The security of the former would be just as good as that of the latter. The farmer then would receive the same financial advantages through the bank as he would if dealing with the Government, and he would avoid the delay, inconvenience, annoyance and "red tape" of which we have had so much complaint.

The business management of the bank would eliminate the wastes which are too often associated with government enterprises. Men would be put into offices because of their fitness for them. There would be no unnecessary multiplication of employees, such as is revealed too often when the Government enters into the realm of business.

In the active work of the bank, if the effective demand for loans increased, the amount of the loans made would also increase and the amount of outstanding bonds would increase in the same proportion. On the contrary, as loans were paid off an equivalent amount of bonds would be retired or redeemed. Evidently, then, as the bank's assets, in the form of first mortgages, increased, its liabilities, in the form of bonds issued, would likewise increase, and to the same extent; and as the bank's assets were reduced by the repayment of loans, its liabilities (bonds) would be reduced. This elasticity of operation, expanding or contracting the assets and liabilities to the same extent at the same time, and with both movements responsive to the demand for loans, would seem to be the essence of economy in the management of this complicated business.

Finally, this system promises to operate favorably for handling the vexed problem of the man who, with character and ability, but with little capital, desires to become the owner of the land he cultivates. For if he can pay, say, ten per cent. of the value of the property, and the land mortgage bank will loan him fifty per cent. of its value, he will usually have no difficulty in getting the vendor to take a second mortgage for the balance. The second mortgage will be more readily taken because the buyer has arranged for his long-term loan on a first mortgage for, say, twenty-five or thirty years, with the bank, and has a definite financial plan, adjusted to his needs, for that extended period. The safety of the second mortgage under these conditions, is very greatly improved, and the rate of interest charged upon the second would be but a fraction higher than that upon the first mortgage. It would be desirable, however, in most cases for the buyer to have enough cash to pay twenty per cent. of the value of the land, and also enough working capital and the means of subsistence for his first year on the farm.

9. CO-OPERATION OF LONG-TERM AND SHORT-TERM CREDITS.

We have described separately our proposed plan for handling the short-term credit and the long-term credit, just as if they were to be operated without any connection. We have done this for the sake of clearness.

In reality the system we recommend combines these two in one organization, which we shall now outline. The short-term credit, the reader will remember, is to be provided for by a savings institution, and the long-term credit by a land mortgage bank. These we propose to unite by giving the land bank the power to receive savings deposits and pay interest on them, as we have already described when considering the organization of the savings institution. These deposits would be held in the same way as by banks or trust companies or mortgage and loan companies, and they would be withdrawable on demand, as in the case of any of these institutions. The guarantee of the deposits by the Government would assure their absolute safety, and there seems no reason to doubt that this part of the business of the land bank would soon show great activity. These savings would be used for making provision for the short loans, and for nothing else; and the capital of the land bank and the cash obtained from the sale of its debentures would be used for furnishing the mortgage loans, and for that alone. Evidently then, under the same board of directors of the land bank, there would be two managers, one giving attention to the short-loan business and the other to the long-term loans. It is desirable to have this loaning business co-ordinated under one control, for at least two reasons:

First. It will cut down on the overhead expenses, making these less than if each branch were organized independently of the other.

Second. There is a very close relation between the two aspects. It is impossible to conceive of a man being able to use properly his long-term loan, with the assurance of repaying his annual instalments, unless he has made suitable provision for working capital from year to year; and, on the other hand, he cannot use to the greatest advantage his short-term loans without having his financial arrangements made for a much longer period.

From the standpoint of those who are interested in the development of the work of the chartered banks this might seem, upon a superficial survey, a means by which business would be lost to them for the purpose of building up a rival institution. In reality the proposed land bank is not a rival. It is formed to take care of needs which, as we have shown, cannot be properly cared for under our present banking law and the recognized practice of commercial banks in all countries. Our plan contemplates the enlargement of the field of banking, not the division of the present field between two competitors. Bankers in Europe and in the British Isles, who formerly were opposed to any system of co-operative banking for the advancement of agriculture, have changed their attitude and expressed their hearty endorsement of such measures of relief. Important bankers in many countries have favored the organization of savings institutions by which the people's money could be used for the welfare of the people to a larger extent than ever before, and some of them have presided over banking congresses for the promotion of the rural interests. Some of the bankers of the United States have openly acknowledged that the establishment of the federal system of long loans and of the few state systems of rural credit which have had any measure of success, instead of taking away from their business, has helped to increase it. It has been the universal experience of countries in which co-operative methods have been employed to furnish loans to farmers that wherever by these means farmers have been benefited the banks have secured corresponding advantages. So long as the supply of capital for farm loans is either limited in amount or furnished upon such terms as do not give the fullest use of the capital, so that this greatest of all the country's enterprises is debarred from its greatest expansion, all the other elements of our economic life, including banking, must remain dwarfed to that extent. Fortunately the day when bankers considered only those things which would contribute immediately and directly to their pecuniary interests is rapidly passing. Banking is being regarded, by the progressive men in that calling, as a means by which they may render service of many kinds to their communities, and they may be assured that in promoting the welfare of their constituency they will reap an abundant share of the wealth produced and of the enhanced social well-being.

The bankers who have vision are more interested in the development of the country than in the farm loan accounts of their banks. The farmers need money in larger amounts than the banks can supply and upon terms which the banks are not permitted to grant. They need long-time amortized loans also, in order that they may change their type of farming to a safer and more permanent basis. The farmer who takes a long-term loan for some productive purpose and under the system we have outlined he would not get it for anything that would not be productive—does not need to have any undue anxiety about the future or the necessity of paying off the principal of the loan, but he can at once set to work to organize his farming along lines which will be the most remunerative in the long run. He begins to buy live stock, machinery, fencing, building materials and other things which will put him upon the basis of successful farming. This makes him a good customer of the merchant in the town. He pays his bills at the stores promptly. The merchant in turn ceases to postpone the payment of the bank for its advances to him on account of the farmer's delay in settling his bills. The increased purchasing power and the increased demand for manufactured goods on the farm not only help to impart new life to manufacturing and to enlarge and improve the character of the business of the mercantile firms in the town, but also to cause a greater demand for the services of the banks. This influence reaches back from the consumer of the finished products to the more remote places where the raw materials are produced. The farmer buys more things for his house; he begins to live better. He establishes a live stock business in connection with his grain farm, so as to turn his raw material into appropriate finished product and thereby carry on his work with the greatest economy. The larger and larger amount of his sales of stock demands increased use of the bank by the buyers of the animals in order to make their payments and arrange for their further disposition. The result of the whole process is that the business of the chartered banks becomes greater and greater, simply as a result of setting the wheels of agriculture into intensified motion through the operation of the rural credit facilities. These considerations make their appeal to the banks, as well as to the commercial and industrial community of interests, wherever agriculture has received such a stimulus. They lift the matter to a higher plane and extend it over a much broader realm of business relations. We shall not here speak of the social advantages which accrue from the establishment of a system of rural credits such as we have described in the foregoing pages; the improvement of the tone of the community, the encouragement afforded to those who no longer feel that they have to fight their battle alone, the increased solidarity of community life—these and other factors which we have already outlined infuse a new spirit into the life of the people.

We shall close this report with the following

CONCLUSIONS.

1. Legislation should be passed to embody the foregoing principles into a sound and carefully integrated system by which agriculture could receive the financial assistance of which it has been too long denied.

2. Provision should be made for and encouragement given to the formation of rural credit societies, as the basis upon which to develop a safe and adequate extension of short-term credits, along the lines we have outlined above. Regular reports should be required from these societies, and there should be careful supervision of their activities.

3. As soon as the legislation has been enacted there should be the formation of the land mortgage bank as the basis of the financial provision for both the short-term credit and the long-term credit. This bank should be given adequate powers, including the right to receive deposits from anyone and pay interest on the same, and the power to borrow money, if necessary, to effect its purposes.

4. The most mature judgment should be exercised in the choice of suitable directors of this bank. Upon this depends the success or the failure of the entire system.

5. Preferably before—but, if that be not possible, after—the legislation has been passed there should be a thorough campaign of education carried on among the farmers, to show them the benefits of the system of rural credits and how to take advantage of it at the earliest opportunity.

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INTERIM REPORT

RESPECTING

Issuers of Marriage Licenses

OF THE

Commission to Inquire into, Consider and Report upon
the Best Mode of Selecting, Appointing, and
Recommending Sheriffs, etc., etc.

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INTERIM REPORT

RESPECTING

ISSUERS OF MARRIAGE LICENSES

To His Honour Lionel Herbert Clarke,
Lieutenant-Governor of Ontario.

May it Please Your Honour:

Having been appointed by Royal Commission to inquire, consider and report (among other things) upon the best mode of selecting, appointing and remunerating Issuers of Marriage Licenses and generally to consider and report upon all matters pertaining to the placing of such office upon the most efficient and business-like footing, we hereby submit this interim report thereon.

The issue of marriage licenses in Canada apparently had an ecclesiastical origin and the fees at one time appear to have gone to the Governor personally. Later, agents for the purpose of issuing marriage licenses were appointed by the Civil Secretary of the Governor. A fee of £2 was charged on each commission of appointment of an agent and the agent was required to pay a further fee of twenty shillings on each license issued through him. These fees were fixed under instructions from the Secretary of State for the Colonies at London, and went to the Civil Secretary personally as an appendage to his office.

The amount charged by the agent was not regulated by the Government, and so long as he paid the twenty shillings fee to the Civil Secretary he might charge the applicant for a license what he pleased. Under these circumstances, it is not surprising to learn that the charge for a marriage license was far from being uniform, varying, it is said, from thirty shillings to five pounds. It appears that even the latter sum was at times exceeded.

In 1842 a change took place. The Civil Secretary ceased to receive the fees that had heretofore been paid to him and they went into the general revenues of the Government. Soon after this an investigation appears to have taken place and it is not surprising to learn that the plan then prevailing was described by the Committee conducting the enquiry as "a notorious system of extortion." Thereafter issuers of marriage licenses were appointed by the Chief Clerk in the Provincial Secretary's office. The fee for a license was fixed at thirty shillings, of which ten shillings went to the issuer and twenty shillings to the Government. The number of agents for the issue of licenses in Upper Canada in 1849, was sixty-nine.

The earliest legislation in Ontario after Confederation, in regard to the issue of marriage licenses, was the Marriage Act of 1874. This Act provided for the issue of licenses or of certificates which were in effect licenses, and either of these forms might be used. These licenses or certificates were issued from the office of the Provincial Secretary and furnished to such persons as the Lieutenant-Governor in Council named for the purpose. The issuers appear to have been responsible persons throughout the community, and were confined to no special class. Issuers had jurisdiction to issue licenses anywhere within the Province, but each issuer was instructed by the Department that he must issue no license outside the County in which he resided, and that if he disobeyed this injunction his commission to issue licenses would be cancelled. This rule of the Department appears to have been universally observed.

The Act of 1874 has continued in force with comparatively slight modification until the present time. There has, however, been a considerable change in the amount of the fees payable for a license. In 1874 the fee was $2.00, the whole of which went to the issuer. By the Marriage Act of 1896 it was provided that the fee should continue to be $2.00, but that of this, twenty cents should go to the Province, leaving $1.80 for the issuer. In 1916 the fee was increased to $5.00, of which $1.80 still continued to go to the issuer, but the Government's share was increased from twenty cents to $3.20. The revenue of the Government in 1919, from its share of the fee, was $72,803.90 and in 1920, $85,032.80.

The number of issuers of marriage licenses in Ontario to-day is about 1,500. In the City of Toronto the number of issuers is 137, more than four-fifths of whom appear to be jewellers. In Hamilton, the number of issuers is thirty-one, in Ottawa twenty-one. Throughout the Province the issuers who are jewellers outnumber those of any other occupation. Among those of other occupations we find druggists, real estate and insurance agents, merchants and undertakers. The undertaker is usually the local furniture dealer.

In nearly every instance the issuing of marriage licenses appears to be a mere "side line" and appointment as issuer appears to be usually sought for the purpose of attracting trade or business. The man who goes to a jeweller to secure a license is at the time a likely purchaser of a ring or other article from the jeweller's stock. The advertisement of a firm of jewellers brought to our attention reads:—

> "We have a special private office for issuing marriage licenses and choosing engagement and wedding rings, and we can arrange a minister for you."

With scarcely an exception, the present issuers of marriage licenses are worthy men and good citizens, but, throughout the Province there has been expressed to the Commission a practically unanimous desire that the right to issue marriage licenses should not be conferred for the purpose of attracting trade or business, but that there should be a certain dignity about the act and that a license instead of being sold over the counter should be issued as an official act by a person holding an important office in the community. Before a marriage license is issued the applicant is required to take an oath that the parties to be married are not related within the prohibited degrees and that the consent of parents, where required, has been obtained. This oath, we fear, has in many instances not been administered as required by law. We are informed by Judges who have appeared before us that in certain cases tried by them in which the applicant for a marriage license was charged with perjury, they have had strong reasons to doubt whether any oath was actually administered.

At the present time births, marriages and deaths are registered with the Clerk of the municipality. He is a responsible and respected official and generally has a wide acquaintance throughout the municipality for which he acts. At nearly all, if not all, the sittings that the Commission has held, the Municipal Clerk has been proposed to us as the proper person to issue marriage licenses. In our opinion the proposal is sound, and we recommend that the Clerks of every city, town, township and village be appointed issuers of marriage licenses, and that such licenses be issued exclusively by them except in the unorganized districts of the Province. In unorganized districts the issuer might well be the Police Magistrate. For the outlying points such as Moose Factory, etc., special appointments should be made.

If the Clerk to whom application for the license is made is one who knows the applicant personally, an additional safeguard against false statements is thus provided, and in order that so far as possible there may be such a safeguard, we recommend the license be issued by the Clerk of the municipality in which one of the parties resides. If the Clerk should be absent from the municipality, or incapacitated, the license should be issued by his deputy duly appointed. If the office should be vacant and there should be no deputy, the licenses might be granted by the Clerk of an adjoining municipality.

At the present time the applicant for a marriage license, who, it might be said is almost invariably the man, makes affidavit as to his age, occupation, residence, etc., and also as to the age, occupation, residence, etc., of the bride. If he states in the affidavit that either he or the bride is under the age of eighteen years he is required to produce the written consent of the parents or guardians. A number of cases have been brought to our attention where the age of the bride has been stated by the applicant to be eighteen years or over, when, in fact, it was less than eighteen years. Great wrongs have been done through these false statements, and we feel that every possible precaution should be taken to prevent their recurrence. In our opinion the law should provide that, in all cases where the parties reside within the Province, both the man and woman shall appear personally before the issuer and each of them make affidavit verifying the particulars required respecting him or her. When one of the parties resides outside of the Province, an affidavit of such party similar in form to the affidavit required to be made before the issuer should be filed with him. In cases where one of the parties is under eighteen years of age, a marriage license should not be issued on the production by the applicant of the written consent of the parents or guardians, but the parents or guardians of the party under age should also, if resident in Ontario and physically able so to do, personally appear with the applicants and sign and acknowledge their consent in the presence of the issuer. Provided, however, that if the consent of parents or guardians is in any case unreasonably withheld the Deputy Registrar-General may consent to the marriage and his consent shall be sufficient.

In the event of there being any doubt in the mind of the issuer as to the identity of the parties or as to the correctness of any of the statements made by the applicants, he should have full power and authority to require the production of witnesses to identify them or either of them, and also to examine under oath or otherwise, other witnesses as to any material enquiry pertaining to the issuing of the license.

The legal age for marriage, which is now eighteen for both sexes, should in the case of the man be raised to twenty-one years, so that no man could be married if less than twenty-one years of age, without the consent of parents or guardians, or the Deputy Registrar-General. The applicants for a marriage license might well be required to state in their respective affidavits whether he or she is a divorced person, and if so, when and where, and by what court or legislative body the divorce was granted. The record of licenses issued should be open for public inspection in the office of the Clerk.

The present license fee seems high and that portion that goes to the Province is apparently considerably more than sufficient to pay the expenses of the Registrar-General's office and any other expenses incidental to the issuing of marriage licenses. In our opinion, it is against sound public policy to raise revenue for the general purposes of the Province by a tax on marriage licenses. As, however, larger expenditure may in the future be required for the purpose of carrying out regulations that hereafter may be made, we do not see our way clear to recommend any reduction in the present fee. We are of opinion that $1.00 is quite enough to allow the issuer, and that $4.00 of the fee should go to the Province, and we so recommend.

In townships, incorporated villages and towns, the fee should go to the Clerk of the municipality and in cities should go as the Council may direct. We deem it important, however, to remove, as far as possible, the element of personal gain to the issuer through the issue of a license. We, therefore, recommend that, after one year from the date of the coming into force of the Act providing that marriage licenses shall be issued by municipal Clerks, all Clerks of municipalities, where the fees go to the Clerk, shall commute the fees for a fixed sum payable annually by the municipality to the Clerk and that the fees shall thereafter go to the municipality. In the event of the Council of the municipality and the Clerk not agreeing upon the amount of the commutation to be fixed, it should be fixed by the County Judge.

While in cities the fees would go to the municipality, the additional work and responsibility placed upon the Clerk should be recognized by the Council and the Clerk's salary increased in cases where justice would demand it. We recommend that where additional help may be required in a Clerk's office, owing to the issuing of marriage licenses, a crippled returned soldier or sailor possessing the necessary qualifications be employed.

In the course of our inquiry we have been impressed with the difficulties and expense surrounding the administration of justice owing to the increasing number of mentally defective people. These difficulties are said to be increasing at a greater ratio than the population is increasing and as a result the State will be called on to make much larger expenditures. The Commission has been impressed with the thought that instead of making elaborate plans and enormous expenditures for treatment of the result, it might be well to consider the possibility of treating the trouble at its source by placing restriction upon the marriage of the mentally defective and insane. We have been asked to recommend that no marriage license be granted unless the applicant furnishes the certificate of a physician that the parties are free from physical and mental disease. The question is a most vital one but appears to us to be beyond the scope of our Commission. We recommend, however, that the Government cause an inquiry to be made into the subject of the marriage of the unfit and that a Committee of men and women possessing special qualifications be appointed for that purpose.

In the State of New York no marriage license is issued unless both parties make and verify under oath, the following statement:

> "I have not to my knowledge been infected with any venereal disease, or if I have been so infected within five years I have had a laboratory test within that period which shows that I am now free from infection from any such disease."

Whether or not such a statement should be required from applicants for a license in Ontario is worthy of consideration by the Legislature.

Our recommendations may be summarized as follows:

1. That the Clerks of all municipalities be made issuers of marriage licenses and that in unorganized districts Police Magistrates be issuers, and that in the more remote districts special appointments be made, and that all commissions to issue marriage licenses now held by others be cancelled.

2. The licenses should be granted by the Clerk of the municipality in which the parties, or one of them, reside.

3. That both parties should be required to personally appear before the issuer and make affidavit as to the particulars required as to himself or herself respectively.

4. That the legal age of marriage in the case of the man be raised to twenty-one years.

5. That where one or both of the parties are under legal age no license shall be issued unless the parents or guardians of the one under age also appear with the parties before the issuer and give their consent. Provided that the Deputy Registrar-General may consent if the consent of parents or guardians should be unreasonably withheld.

6. That full power be given to the issuer of marriage licenses to require the production of witnesses to identify the applicants for a license and also to examine, under oath or otherwise, other witnesses touching any material inquiry pertaining to the issuing of the license and that the record of licenses issued be open for public inspection.

7. That the license fee be fixed at $5.00, of which $1.00 shall go to the issuer and $4.00 to the Provincial Government. In cities the $1.00 fee shall go to the municipality. In other municipalities it shall be commuted for a fixed annual sum payable to the Clerk of the municipality as hereinbefore set forth.

8. That where additional help is required by the issuer of marriage licenses, a crippled returned soldier or sailor possessing the necessary qualifications be employed.

9. That the Government appoint a Committee of specially qualified persons for the purpose of considering and reporting upon the advisability of restricting the issue of licenses for the marriage of the mentally defective and insane.

(Sgd.) W. D. GREGORY, *Chairman.*
HORACE L. BRITTAIN.
NORMAN SOMMERVILLE.
ALBERT HELLYER.
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INTERIM REPORT

RESPECTING

POLICE MAGISTRATES

OF THE

Commission to Inquire into, Consider and Report upon the Best Mode of Selecting, Appointing and Remunerating Sheriffs, etc., etc.

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Interim Report Respecting Police Magistrates

To His Honour Lionel Herbert Clarke,
Lieutenant-Governor of Ontario.

May it Please Your Honour:

Having been appointed by Royal Commission to inquire into, consider and report upon, among other things, the best mode of selecting, appointing and remunerating Police Magistrates, and generally to consider and report upon all matters pertaining to the placing of such office upon the most efficient and business-like footing, we hereby submit this interim report thereon.

Police Magistrates appear to have been appointed first in Ontario under the provisions of the Municipal Corporations Act of Upper Canada, passed by the Parliament of Canada in 1849. This Act provided for the appointment of a Police Magistrate in each city or town upon the request of the Council. The salary to be paid him was fixed at not less than £100 per annum. The same statute also provided for the establishment of a Court of Record, to be known as "The Recorder's Court," which was to be presided over by a Recorder assisted by one or more Aldermen. This Court had the same jurisdiction, civil and criminal, as the Court of the Quarter Sessions of the Peace. Recorders were barristers of not less than five years' standing and received a salary of £250 per annum. There was a provision in the Act that the office of Recorder and Police Magistrate might be vested in the same person. The Recorder might be appointed by the Government to preside over the Division Court within his jurisdiction, and for such purpose he had the powers of a County Court Judge. This civil jurisdiction continued until 1868.

Originally, the jurisdiction of a Police Magistrate was as limited as that of a Justice of the Peace, which was almost entirely confined to conducting preliminary enquiries. Subject to the consent of the accused, the Recorder of any city might hear and determine cases of simple larceny where the value of the property did not exceed $1.00, and might also dispose of certain other cases where the penalty was comparatively light. Beyond this he could not go. In 1864, all Police Magistrates of towns were given the same summary jurisdiction and powers as Recorders in cities, and later all Recorders and Police Magistrates were given the same jurisdiction as two Justices of the Peace. Some years later the office of Recorder passed out of existence.

In 1857 an Act was passed providing for the appointment of what were known as Stipendiary Magistrates in the Judicial Districts of Northern Ontario. These Magistrates were appointed and paid by the Provincial Government and had the same jurisdiction in criminal matters as a Justice of the Peace. The Act provided that a Stipendiary Magistrate should preside over the Division Courts in his District, and could summarily determine all questions of law and fact. The Statute under which Stipendiary Magistrates were appointed was repealed in 1897.

In 1892, under the Criminal Code adopted in that year, the jurisdiction of all Police Magistrates was greatly extended, and ever since then they have had full authority and jurisdiction to try summarily, with the consent of the accused, all those cases which are within the jurisdiction of the Court of General Sessions of the Peace, and to award the same punishment as that Court has authority to impose. The cases which a Police Magistrate may try, without the consent of the accused, have also been largely increased, and now include, in cities having a population of over 25,000, all cases of theft and of obtaining property by false pretenses and receiving stolen goods where the value of the property stolen, received or obtained does not exceed $10.00. Police Magistrates also have jurisdiction to try all cases in regard to disorderly houses, and all non-indictable offences. Besides having widely extended jurisdiction under the Criminal Code of the Dominion, they have full authority to try all actions for breach of municipal by-laws and all cases in which penalties are imposed by Provincial legislation, including breaches of The Ontario Temperance Act.

The extension of the jurisdiction of Police Magistrates made by the Criminal Code has worked a revolution in the administration of criminal justice in Ontario. While before 1892 there were less than one hundred Police Magistrates in Ontario, all of whom exercised a comparatively limited jurisdiction, there are now about two hundred, each one of whom has, with the consent of the accused, as complete jurisdiction in criminal matters within his district as a County or District Court Judge. The total number of persons found guilty of crime in the Province of Ontario in the year 1919, and who were imprisoned, was 7,904. Of these, 726 were sentenced at the County Judge's Criminal Court, 74 at the General Sessions of the Peace, 71 at the Assizes, and 7,033 by Police Magistrates and Justices of the Peace. The proportion of these cases tried by Justices of the Peace was very small. It should also be borne in mind that all these persons sentenced at the County Judge's Criminal Court, at the Sessions and at the Assizes, had, in nearly every instance, a preliminary hearing before a Police Magistrate. In addition to these cases, Police Magistrates tried in 1919 tens of thousands of cases where a fine was imposed or the charge dismissed. The old system of preliminary hearing before the Police Magistrates and committal for trial at the Sessions or the Assizes, has thus been superseded, in nine-tenths of the criminal cases, by summary trial before the Police Magistrates. This change in system has resulted in an enormous saving in the cost of administering criminal justice.

Police Magistrates are all appointed by the Provincial Government, and the territorial jurisdiction of each one is set forth in the Commission appointing him. The jurisdiction of a Magistrate seldom extends beyond the limit of the county or district in which he resides. Frequently it covers only a portion of a county, such as a city, town, village or township, or several municipalities. Out of a total of 197 Police Magistrates 46 are over 70 years of age, and of these 11 are over 80. Notwithstanding the increasing number of Police Magistrates, there are still large portions of Ontario over which no Police Magistrate has jurisdiction at present. Attached hereto is a list of the Police Magistrates of the Province with their respective ages and dates of appointment.

The minimum salary payable to Police Magistrates is fixed by Statute, and is as follows:

In cities having a population of 50,000 or over, $3,200 per annum.
In cities having a population of 18,000 or over, $2,000 per annum.
In cities having a population of less than 18,000, $1,400 per annum.
In towns where the population is over 8,000, $1,200 per annum.
In towns where the population is over 6,000 and not more than 8,000, $1,000 per annum.
In towns where the population is not more than 6,000, $800 per annum.

No salaried Police Magistrate is appointed for a town having a population of less than 5,000 unless the Council, by a two-thirds majority, petition for the appointment of a Police Magistrate, and such Council may fix and increase or reduce the salary. Like provision is made in the case of counties, but for a county a minimum salary of $600 must be paid.

In a number of instances municipalities pay their Magistrates more than the minimum salary. In Toronto, for instance, the minimum salary is $3,200, but the senior Police Magistrate receives $6,000. Sometimes a Police Magistrate receives a salary from each of several municipalities. Often he receives a salary from one municipality and fees from an adjoining one. In most municipalities having a population of less than 5,000, the salary, where any salary is paid, is trifling. By far the larger number of Police Magistrates are dependent for the income from their office upon fees collected by them from the party accused if they register a conviction against him. In the unorganized districts of Ontario, the Magistrate's salary is paid by the Provincial Government. The total remuneration of the present Police Magistrates in salaries and fees is approximately $150,000 per annum.

Notwithstanding the enormous increase in the amount of work performed by Police Magistrates, the greater responsibility involved and the large increase in the cost of living, their salaries are practically the same as they were sixty years ago. In some instances they are actually less. At the present time there are a number of Police Magistrates who are efficiently and faithfully administering the law under great difficulties, with salaries sadly inadequate. In many places the Police Magistrates devote their whole time to Magistrates' work, but as a general rule they are men engaged in active business callings or in professional life. Among them we find farmers, merchants, insurance agents, millers, physicians, a restaurant keeper and a seedman. In thirty-six cities and towns the Police Magistrates are lawyers engaged in active practice. Among those places where the Police Magistrates are practising lawyers are, Barrie, Belleville, Chatham, Cornwall, Galt, Guelph, Kingston, Kitchener, Lindsay, London, Niagara Falls, Ottawa, Owen Sound, Peterborough, St. Catharines, Sault Ste. Marie, St. Thomas, Waterloo, Windsor, and Woodstock.

That we should have just and able men upon the Bench to administer the laws in our courts we all agree, but do we not often fail to recognize that it is equally important, in fact more important, to have men possessing as high qualifications for their work on the Bench in our Police Courts? Many a Police Magistrate disposes of in a year ten times as many cases as any High Court Judge. The Judges of the Supreme Court deal mainly with the rights of property, but the Police Magistrates administer those laws which affect the life and liberty of the individual citizen; the judgments which they deliver determine for good or evil the future of thousands and make or mar many a human life. No Magistrate should be appointed without the most careful consideration and a full sense of the responsibility involved on the part of the Government. The possession of land does not assure wisdom or virtue, and no property qualification should be required.

We are glad to pay tribute to the high character of the Police Magistrates of Ontario. There are exceptions, but the exceptions are few. It is true that there are miscarriages of justice, but these miscarriages have usually occurred, not through intentional wrongdoing, but through ignorance and lack of training or experience and sometimes because of a lack of intellectual qualifications. When we remember that most of the Police Magistrates go on the Magistrate's Bench without experience and without any previous training or instruction to exercise the criminal jurisdiction of a County Court Judge, it is surprising that the shortcomings have not been far greater.

The humblest citizen brought up for trial in the Police Court has as much right to have his case tried by a fully qualified Magistrate as a patient in the hospital has the right to be operated on by a skilful surgeon. A Police Magistrate should be a man of high character, of inflexible integrity and of broad sympathies. He should understand human nature and have a thorough knowledge of the laws that he administers. To no one is the presence of a just and able man upon the Bench of more importance than to the poor and unlearned who come before him for trial.

The question as to whether or not the law should provide that no one shall be eligible for appointment as Police Magistrate unless a lawyer has been often raised before us. Many have strongly urged that lawyers only should be eligible. There is no doubt that it is most important that a Magistrate should have some knowledge of the law of evidence and of the laws that he administers. Many a conviction has been set aside because the Magistrate knew little of either. Not infrequently a Magistrate will, through lack of legal knowledge, try a case which is really not a criminal case at all, but a civil one, and the parties have been put to great trouble and the county to considerable expense thereby. On the other hand, there are qualities that a Magistrate should possess that are of greater importance than a knowledge of law, and there are many lawyers who do not possess these qualities. Some of the best Police Magistrates in Ontario to-day are men who had little or no knowledge of law at the time of their appointment, but it is also true that these Police Magistrates are all men who have acquired since their appointment, through study and experience, an extensive knowledge of law, sometimes, we fear, at the expense of those that have come before them.

Several of them have expressed the opinion to us that no man without a knowledge of law sufficient to enable him to discharge efficiently from the first the duties of his office, should be hereafter appointed a Police Magistrate. It has been suggested to us that a Police Magistrate uninformed in law might, if called upon to decide a matter of law arising in the course of a trial, refer it to the County Judge or take the advice of the Crown Attorney. There are objections to both these suggested courses. It would be inconvenient to have a case stand over in order that a question of law might be submitted to the County Judge, and it is undesirable that the Magistrate should have to rely for his law upon the lawyer appearing for one of the parties to the case.

"A man," said his Honour Judge Gunn to us during our sitting at Ottawa, "ought to have the right to be tried by someone who has the knowledge of the law and who can weigh facts and dispose of them."

"Some examination as to the Criminal Code and other Statutes should be required," said his Honour Judge Lavell, to the Commission at Kingston.

"A Police Magistrate should be a fully qualified barrister," said Mr. W. Tite, speaking for the local labour organization before the Commission at London.

"Where a lawyer is not appointed Police Magistrate there should be some examination held," said Police Magistrate Miller, of Wiarton.

"A Police Magistrate who can send a man to the penitentiary should have some knowledge of the law of evidence," said his Honour Judge Sutherland to the Commission at Owen Sound. "A combination of law and common sense is the most satisfactory combination."

It has been suggested to us that the Province might well provide a course of instruction for anyone desiring to qualify for Police Magistrate and it appears to us that the suggestion has some merit. An arrangement for a class for this purpose at the Law School at Toronto could probably be made. We train men for judges, we train officers for the army, we train school teachers, we train physicians; why not train magistrates?

The system of paying Magistrates by fees is indefensible. It has been condemned by the Police Magistrates' Association of Ontario, and (with perhaps one exception) by all of the many Police Magistrates who have appeared before us. It has also been unanimously condemned by all others whom we have heard upon the subject. The view expressed is that a Magistrate should not be compelled to receive his remuneration in the form of fees from the unfortunate individuals who are brought before him, and it is also urged that, however right-minded a Magistrate may be, the fact that he receives fees when he convicts the accused, and usually receives nothing if he dismisses the case, is bound to arouse, and does arouse, strong suspicion on the part of the public that the Magistrate in arriving at his decision has been influenced by selfish motives.

"No officer," said Mr. Washington, Crown Attorney of Wentworth, to us at Hamilton, "should be paid by fees if it is in that official's power to lessen or increase his income thereby. Where a Magistrate is paid by fees the temptation is to issue warrants in trifling cases where they never should be issued."

At the sitting of the Commission at London, Mr. Frank Hunt, Police Magistrate for the County of Elgin, said, "I think the system (payment by fees) should be relegated to the limbo of 'The Burning of Witches Act' and 'Trial by Combat.' It is bad enough to have the fee system in civil cases, but when it comes to the criminal law no Magistrate should be paid by fees."

It is surprising that the system of paying Magistrates by fees has survived so long. It is a disgrace to Ontario.

In many instances an aggrieved person goes to a Police Magistrate, lays his case before him and seeks his advice as to whether or not criminal proceedings should be taken. Frequently long conferences are held. If proceedings are taken on the Magistrate's advice, he becomes, in a sense, counsel for the complainant, and when he goes upon the Bench to hear the case he can hardly be said to go with unbiased mind. We have no doubt that Magistrates, as a rule, endeavour to free their mind from any influence which may have thus been brought to bear upon it, but we are told by the Magistrates themselves that they are conscious of a certain bias in such cases, and regard the practice as objectionable. This practice will continue so long as Magistrates take informations themselves in cases which are tried by them.

"It has always struck me that the present system is wrong," says Crown Attorney Cowper, of Welland. "The complainant goes to the Magistrate and states his case, and the Magistrate, having heard one side, proceeds to issue his summons or warrant and then try the case . . . . and where he tries indictable cases there is no appeal."

"I frequently have found," said his Honour Judge Spotton to us at Guelph, "that a Magistrate is a conveyancer or local merchant, and the people go in and confer with him before they lay a charge and the Magistrate advises them, and when this is done it is pretty difficult for the Magistrate to give the case the proper consideration."

The attention of the Commission has been called to the trial of cases arising out of breaches of the law on the Toronto and Hamilton Highway. In 1917 an Act was passed by the Legislature which provided for the appointment of a Police Magistrate with jurisdiction to try offences against this Act, the Motor Vehicles Act, and certain other offences committed upon any part of the highway or in the vicinity thereof. The salary of the Magistrate is fixed by the Highway Commission. Such a Police Magistrate has been appointed, and most of the cases arising on the Highway are tried by him. Two Police Magistrates, one residing at Oakville and the other at Port Credit, try the remaining cases. These two last named Magistrates have no exclusive jurisdiction over any particular portion of the Highway, but try only those cases that the officers of the Highway Commission bring before them. The Oakville and Port Credit Magistrates are paid by fees, and thus their income from Highway cases may be made greater or smaller or entirely wiped out at the pleasure of the Highway officials. The income of the salaried Magistrate may be increased or reduced at the pleasure of the Highway Commission. The Highway Commission is practically a party to all Highway cases and it should not be in its power to decide what number of cases shall be brought before the Oakville or Port Credit Magistrates. The salary of the Police Magistrate appointed under the Highway Act should be fixed not by the Commission but by the Government. Such Highway cases as are not tried by him should be tried by Magistrates within whose exclusive jurisdiction they come and who are under no compliment to Highway officials for bringing cases before them.

We would not tolerate for a moment the practice of law or the carrying on of any other business by our Judges; in fact they are prohibited from so doing by Statute. The objection in the case of Judges applies with at least equal force to Police Magistrates. That they should be above suspicion is seen clearly by the Police Magistrates themselves. One of them, who practises law, said to us:—

"A client of mine got into an altercation with a woman living in the same house, and the case was brought up in the Police Court; the matter was trifling and I dismissed it, but all the time I felt unconsciously more or less prejudiced in my client's favour. I have fined several of my own clients, but it is not a proper position to be in."

"I remember one time," said a Kent County Police Magistrate, who is a lawyer, "a man consulted me about a line fence and I wrote a letter to his neighbour, and a day or two afterwards the man who consulted me came in for a warrant against his neighbour for assault."

F. W. Kerr, High Constable for Brant County, said to the Commission: "A Magistrate is just human like the rest of us, and if he is in some business and people are brought before him who deal with him, he is not apt to administer justice."

Another Magistrate informed us that he had standing retainers from a number of corporations in his district. He was legally entitled to accept them, but the effect on the community must undoubtedly have been bad, and the position in which he had placed himself must have been embarrassing to him.

The foregoing considerations lead us to the conclusion that anyone holding the office of Police Magistrate should possess the qualities of heart and head that we have outlined, that he should have a knowledge of the laws that he may be required to administer, that he should carry on no business and practise no profession, but should devote himself exclusively to Police Magistrate's work. This conclusion is not an arbitrary one but has been pressed upon us in all parts of the

Province with almost unanimous voice by those who have appeared before us. It has been pressed upon us not only by the public, but by the Police Magistrates themselves, both individually and as an Association. In no part of the Province has the proposal received greater support than in the new districts, where unsettled conditions and difficulties in the way of enforcement of the law, make the presence of thoroughly qualified Magistrates, just, impartial and above suspicion, a priceless asset to the community.

"I think," said Mr. John R. Blake, Police Magistrate at Galt, "it is advisable to have all criminal cases disposed of by a limited number of trained men. . . . A trained Magistrate would not send a man up for trial if he could dispose of the case himself. . . . My own impression is that it is just as important to have a trained Magistrate as a trained Judge."

His Honour Judge Snider, at the sitting of the Commission at Hamilton, said, "In my opinion, it would be a great deal better if Police Magistrates were thoroughly qualified men, and they should be given a sufficient territory to cover so that their time would be completely occupied."

The cost of trying a case at the Sessions ranges from about $100.00 to $200.00. This cost is made up of fees of Sheriff and other Court officials, cost of the Grand and Petit Juries, fees of Crown Attorney, cost of bringing witnesses from long distances and other expenses of various kinds. Many cases that now go up to the Sessions would be tried by the Police Magistrate, if he were a trained and thoroughly competent man, or would not be tried at all. The cost of the trial before the Police Magistrate would be trifling and the county would be saved the whole or nearly the whole of the cost involved in trial at the Sessions.

At the sitting of the Commission at Brampton, his Honour Judge Justin in advocating the appointment of fully qualified Police Magistrates said: "One case came before me from down in the lower end of the county and it was a question of whether a man was guilty of the theft of some potatoes, and that (trial) cost the county $100.00, and I found the man not guilty. It was not a criminal case at all."

"An efficient Magistrate," said his Honour Judge Sutherland at Owen Sound, "might save the county a considerable sum of money, owing to the fact that he would try cases and not send them up to the Judge to be tried."

Mr. C. Seager, Crown Attorney for the County of Huron, in testifying before us said: "If a man of judicial temperament and strong common sense he (the Police Magistrate) would gain the confidence of the public and there would be a desire on the part of most persons charged with offences to elect to have their cases tried at once and on the spot rather than be sent up for trial; in this way great expense would be saved."

So far as possible the territorial jurisdiction of such Police Magistrates should be bounded by County or District lines, the County or District under our system being the administrative unit, but in many parts of Ontario, especially in the North, it would probably be found better to lay out the districts within which a Police Magistrate should exercise jurisdiction along lines of communication rather than to observe County or District boundaries. If this course were adopted, where conditions rendered it advisable to do so, a Police Magistrate could often cover more territory than he would be able to cover if confined within County or District lines. In some instances it might be more convenient to lay out a district large enough to keep two Police Magistrates employed and for them to arrange a division of the work. There are other parts of the Province where it would be difficult to lay out a district sufficiently large to engage the whole time of one Police Magistrate. For such a district a special arrangement might have to be made, observing as far as possible, the principles hereinbefore laid down.

The Police Magistrate or Police Magistrates appointed for such district thus laid out should have exclusive jurisdiction to hear cases within it. No Magistrate (and the word "Magistrate" or "local Magistrate" as used now and as it will be used hereafter in this report, means a Police Magistrate under the existing system or a Justice of the Peace) should hear a case arising in such a district unless requested so to do by the District Police Magistrate. All proceedings preliminary to the trial of an accused person such as taking an information, issuing a summons or warrant and granting bail, should be conducted by a local Magistrate but the trial would be conducted by the District Police Magistrate who would thus come to the trial unbiassed by previous communication with the party accused. The trial should be held at the place where the offence was committed or at some other place fixed by the District Police Magistrate as convenience and the circumstances of the case might require. All fees payable for services rendered by the local Magistrate or constable in the proceedings prior to trial should go to the county in which the proceedings are taken, and a sum equal to these fees should be paid by the county to the Magistrate and constable respectively, who should receive just the same amount whether the accused be convicted or acquitted. This system of payment of Magistrates by the county should apply to all Magistrates so that no Magistrate shall hereafter receive for himself fees from the complainant or defendant. The system of payment of Magistrates' fees by the county, whatever the result of the proceedings may be and the turning into the county of the fees collected by the Magistrate, is, we understand, now in operation in the County of Brant.

The District Magistrate might at any time designate a local Magistrate to try such cases as breaches of municipal by-laws or of common assault, but no local Magistrate should try a case unless so designated by the District Magistrate or by the Attorney-General. Sixty, or possibly fifty or less, District Police Magistrates could, under the proposed system, try all cases arising in Ontario. We are not prepared to recommend that everyone appointed a District Police Magistrate should be a lawyer, but we are of opinion that they should have such a knowledge of the laws of evidence and of the criminal code as to enable them efficiently to discharge their duties. The District Police Magistrates should be chosen from those now holding the office of Police Magistrate and possessing the qualifications herein set forth. If the number of the present Police Magistrates so qualified were found to be insufficient, men not now Police Magistrates could be appointed until the required number should be made up.

Each District Police Magistrate should have provincial jurisdiction, but no District Police Magistrate should exercise jurisdiction outside of the district allotted to him, except at the request of the Attorney-General, or of the Police Magistrate of an adjoining district. It might be advisable to have several unattached District Police Magistrates who would be available to send to any district where a Magistrate might be temporarily incapacitated, or where it might be thought advisable to have an outside District Police Magistrate try a special case. The District Police Magistrates should be paid salaries. All salaries should be fixed by the Provincial Government and one-half thereof paid by the Government. The fines imposed (other than those for breach of municipal by-laws, for breaches of the Ontario Temperance Act where the municipality prosecutes, and for violation of the revenue laws of the Dominion) should all go to the Provincial Government, and the District Police Magistrate's fees charged against the accused party and paid, should go into the Provincial Treasury. All fines for breaches of municipal by-laws should go to the municipality prosecuting. All constables' fees should go to the municipality paying the constable.

In some parts of Ontario the cost of living is less than it is in others and the salary paid to the District Police Magistrates should be graded. The volume of work performed should also be taken into consideration. The salary should be adequate to enable a Magistrate to provide properly for himself and family. In those cases where it may prove necessary to appoint a District Police Magistrate whose whole time is not required for the performance of his Magisterial duties and is, therefore, permitted to carry on an outside business, the business or profession carried on should be of a character unlikely to affect his independence on the Bench, such, for instance, as Solicitor for a municipality or municipalities, Secretary of a School Board or other public body.

There are at the present time in Ontario seventy-one Judges of County and District Courts, many of whom have ample time on their hands to perform much of the work now done by Police Magistrates. In the smaller Counties and in those Counties and Judicial Districts where there are both a Senior and Junior Judge, the Judge, or one of the Judges, as the case may be, might well, in our judgment, act as Police Magistrate for the County or District Town and adjacent municipalities, possibly, in some instances, for the whole County. Such men, as a rule, possess exceptional qualifications, and if they were to act our Magistrates' Courts would be placed on a higher level. To a Judge undertaking this work the Legislature might well allow a reasonable addition to his compensation. If the County Judges were to do Police Magistrates' work to the extent suggested, the number of District Police Magistrates whom it would be necessary to appoint to do Police Magistrates' work exclusively would be greatly lessened and the total expense to the Province much reduced.

It may appear to some that it would be objectionable for a County Judge to conduct the preliminary enquiry in the case of indictable offences where the prisoner elects to be tried by a jury. Such an objection would seem to be more theoretical than practical, because, in the first instance, the Judge when sitting in the preliminary enquiry as a Magistrate, merely decides whether or not there is sufficient evidence to warrant the accused being tried, but when at the trial the County Judge sits with a jury to try the case it is the jury that gives the verdict, the Judge merely instructing the jury as to the law. On the other hand the fact that the County Judge was sitting as a Magistrate would, in many instances, lead to the accused electing to be tried summarily by him instead of electing to be tried in the County Judge's Criminal Court or before a jury at the Sessions, and thus the large expense of trial in the Judge's Criminal Court or at the Sessions would be saved. It might be provided, however, that where the County Judge as a Magistrate conducts the preliminary enquiry and the accused elects to be tried by a jury, the accused may at his option have the case tried by the Judge of an adjoining county sitting with a jury in the County or District where the case arises, or, in the case of appeal, if there is no additional Judge in the County to hear the appeal, it could be heard by the Judge of an adjoining County or District. To bring about these changes, amendments to the Criminal Code would of course be necessary.

In cities and towns where Boards of Police Commissioners are constituted the Police Magistrate is a member of the Board. He takes a leading part in making the appointments and promotions. The policeman who testifies before the Magistrate in Court is often one of his appointees and the relations between the Magistrate and the Police give the Police an influence in the Court that may be undesirable and prejudicial to persons brought to trial and against whom they testify. It tends to make the Court, in substance as well as in name, a Police Court. In our opinion it would be in the public interest to provide that the Police Magistrate shall not be a member of the Board of Police Commissioners.

Under the provisions of Section 247 of "The Municipal Act" the Councils of Counties are empowered to grant retiring allowances to their officials. This section does not apparently include Police Magistrates. The scope of the section might well, in our judgment, be widened so as to include Police Magistrates, many of whom give years of faithful service to their communities for small compensation.

We have found throughout the Province an almost complete failure to audit the Magistrates' books and to see that the fines and costs imposed are properly accounted for. Police Magistrates have urged upon us the importance of having such an audit regularly made so that there may be no ground for public suspicion that fines and costs are improperly retained. At the present time Police Magistrates are required to pay over to the Crown Attorney for the County or District the fines payable to the Province, and on these fines the Crown Attorney receives a commission of four per cent., although his services in collecting and remitting are of an almost purely nominal character. In our opinion the fines should go directly from the Magistrate to the Government thus saving the commission now payable to the Crown Attorney.

Not only should there be a regular and thorough audit of Police Magistrates' books, but the Court should in all respects be placed upon the most efficient footing. Offices should be inspected, business systematized, cases indexed, all books properly kept and documents preserved. A Police Court Office, properly equipped, should be provided and criminal business should be conducted in the open and not as it often is to-day, in a corner away from the public view. In too many instances municipalities fail to perform the obligations imposed upon them to provide proper accommodation and equipment. Such conditions should not be permitted to continue and provision should be made that if a municipality fails in its duties some official of the Government should be clothed with full authority to enforce the law. Years ago Division Courts were in a very bad condition: efficient inspection of them has brought about a vast improvement. It is still more important that there should be efficient organization of Police Courts.

Many of those appearing before us have expressed the view that if District Police Magistrates of the character outlined by us were appointed, they ought to be given civil jurisdiction in cases of debt up to one hundred dollars. There are many points in the unorganized districts of Ontario remote from the Division Courts, or where Division Courts are very infrequently held. It might serve a useful purpose if a Police Magistrate were given jurisdiction in civil cases at such places, and we recommend that the Government be given authority to confer upon any Police Magistrate, by Order-in-Council, power to exercise civil jurisdiction to the extent stated in any or all parts of Judicial Districts when, in the opinion of the Government, the public interest would be served by such jurisdiction being given.

Provision should be made for the appointment of a stenographer who would take evidence in appealable cases. If the evidence were taken by the stenographer the trial would be shortened, and, as one Police Magistrate remarked to us, "it would make for efficiency." The expense should be paid on the certificate of the Magistrate by the municipality where the offence was committed.

It is desirable to remove any misapprehension in the public mind that the Police Magistrate is part of the Police system. We recommend that hereafter he be called "Provincial Magistrate," or "District Magistrate," and not "Police Magistrate."

When a man has been appointed Police Magistrate in the past, he has been allowed to go his own way. There has been no instruction, no meeting for conference. One result has been that there is lack of uniformity in sentences imposed for the same class of offences. In order to bring about greater efficiency and uniformity we recommend that the Attorney-General arrange for conferences of Magistrates from time to time for general discussion of matters pertaining to their office.

Many of those summarily tried in the Police Court are persons without means to employ counsel to conduct their defence. In such cases the prisoner goes undefended, or else begs or borrows enough from his or her friends to employ a lawyer. A large proportion of the accused parties are foreigners with little or no knowledge of our laws or our language. Police Magistrates tell us that sometimes prisoners are made the prey of unscrupulous lawyers who take from them fees far in excess of the value of the services rendered. The effect of this practice has been to create in the mind of the accused a deep mistrust of our laws and our institutions. Some of those who have appeared before us have urged that in all indictable cases where the accused elects to be tried summarily before the Police Magistrate, and there appears to be ground for a defence and it further appears that the prisoner should have legal aid and his means are insufficient to enable him to obtain it, the Police Magistrate trying the case should so certify, and that a lawyer to defend him should be provided at the expense of the municipality within which the offence charged is alleged to have been committed. It has been proposed that a list of lawyers prepared to conduct defences should be furnished to the Magistrate, and any prisoner coming within the class mentioned should be permitted to select a counsel from that list, and that the entire amount allowed a lawyer for defending a prisoner might be fixed at $10.00 and all necessary disbursements; the fee to be increased in cases which the Magistrate certifies to have been cases of special difficulty, to a sum not exceeding $20.00 or $25.00. This subject has been dealt with in England by "The Poor Prisoners' Defence Act." A somewhat similar law was in operation in Scotland before it was adopted in England. We have much sympathy with these proposals and commend them to the serious consideration of the Legislature.

The Toronto Police Magistrates will be the subject of a separate report and certain matters relating to Police Courts generally, not touched upon in this report, will be dealt with therein.

Our recommendations may be summarized as follows:—

1. That the Police Magistrates' work be performed wholly by men specially qualified and devoting their whole time to it and engaging in no other business, and that the Province be divided into districts and one or more Police Magistrates be appointed for each District and be given exclusive jurisdiction therein, subject to the proviso that the Attorney-General may send in another Magistrate whenever he sees fit to do so to try a certain case, or certain cases, or that the Magistrate himself may invite another Magistrate to assist him.

2. That none of the present Police Magistrates shall have jurisdiction in any of the Districts so created unless appointed therefor or requested to act therein by the District Magistrate or the Attorney-General.

3. That the system of payment of Police Magistrates by fees be wholly abolished.

4. That the taking of informations, issuing of summonses and warrants and other proceedings prior to trial be conducted by a Magistrate other than the one who tries the case (so far as the Criminal Code permits) except, possibly, in proceedings for breaches of municipal by-laws or cases of a trivial character.

5. That the fines imposed (other than those for breaches of municipal by-laws, for breaches of the Ontario Temperance Act where the municipality prosecutes, and the fines payable to the Dominion Government) together with Police Magistrates' costs shall all go to the Province. That the salaries of District Police Magistrates be fixed by the Government and that one-half the salaries of District Police Magistrates be paid by the Province and the other half by the municipality or municipalities served.

6. That where conditions permit, County and District Court Judges be appointed to act as Police Magistrates for County or District Towns and such other municipalities as they can cover, and shall receive reasonable compensation for services rendered as Police Magistrates.

7. That District Police Magistrates be retired when attaining the age of seventy years unless the term be extended by the Government and that such District Police Magistrates be removable only for cause.

8. That provision be made for the regular inspection of Police Magistrates' offices; the inspection and audit of books of all Police Magistrates and that all fines and costs to which the Government is entitled be paid direct to the Government. Provision should also be made for the performance of all obligations in respect of Police Magistrates placed upon municipalities by Statute.

9. That Section 247 of the Municipal Act be amended so as to give power to municipalities to grant a retiring allowance to a Police Magistrate now holding office.

10. That Police Magistrates shall not be members of Police Commissions.

11. That Magistrates trying cases arising on the Toronto and Hamilton Highway be made absolutely independent of the Highway Commission and be placed under no obligation to it.

12. That civil jurisdiction up to $100.00 be conferred on Police Magistrates in unorganized districts by Order-in-Council whenever public interest may be served thereby.

13. That a stenographer, when required, be provided for a Police Magistrate and that the salary of the stenographer be paid by the municipality or municipalities comprising the Police Magistrate's district.

14. That conferences of Police Magistrates be held from time to time.

15. That the title "Police Magistrate" be changed to "Provincial Magistrate" or "District Magistrate."

(Sgd.) W. D. GREGORY,
Chairman.
" HORACE L. BRITTAIN.
" NORMAN SOMMERVILLE.
" ALBERT HELLYER.
" E. A. POCOCK.

LIST OF POLICE MAGISTRATES

LIST OF POLICE MAGISTRATES IN ONTARIO, JANUARY 1, 1921.

Name	Other occupation	Address	Date of Appointment	Age last Birthday
Anderson, S. T.	Township Clerk	Comber, Tilbury W	22 Nov., 1905	64
Andrews, Silas J.	Manufacturer, cement products	Clinton, Huron Co.	23 June, 1906 20 Dec., 1915	68
Armstrong, Mark	No other business	Markdale	24 Mar., 1914	67
Arnold, Saxon B.	Barrister	Chatham, Kent Co.	25 July, 1916	54
Arthurs, Edward	Customs	Espanola, Sudbury Dist.	11 Dec., 1918	32
Askwith, John E.	No other occupation	Ottawa, Carlton Co.	23 Aug., 1907 23 Mar., 1918	79
Atkinson, Seigfried	No other occupation	Haileybury, Nipissing Dist.	9 April, 1908	41
Aylesworth, James	Asst. Postmaster, Tp. Clerk, Div. Court Clerk, etc.	Tamworth, Lennox and Addington	23 May, 1895	78
Ball, Alfred S.	Barrister	Woodstock, Oxford Co.	21 Oct., 1903	70
Barr, Walter J.	No other business	Burlington, Halton Co.	10 May, 1916	61
Bartlett, George W.	Superintendent, Algonquin Park	Algonquin Park, Nipissing Dist.	1 Aug., 1898 11 Nov., 1910	68
Beaman, William D.	Insurance, conveyancing	Essex	11 Dec., 1890	69
Bedford, Henry R.	Barrister, Town Clerk and Treasurer	Deseronto, Hastings Co	12 May, 1897 18 May, 1906	75
Blake, John R.	Barrister	Galt, Waterloo Co	27 Jan., 1899	53
Boler, Walter Harold	Restaurant proprietor	Byng Inlet, Parry Sound	16 May, 1918	51
Bond, Frank M.	Manager, canning company	Port Dover, Norfolk Co.	7 June, 1912	52
Bradbury, John R.	Insurance, Game and Fisheries Overseer	Blind River, Algoma Dist.	14 Nov., 1914	58
Bradford, Jesse	Barrister	Lindsay, Victoria Co.	29 Mar., 1917	43
Bradley, Ira B.	General merchant	Latchford, Temiskaming Dist.	25 Jan., 1919	49
Bradshaw, Jas. Wm.	County Clerk	Portsmouth, Frontenac Co.	18 Nov., 1914	68
Bridgwater, John Thos.	Municipal Clerk	Dresden, Kent Co.	5 Feb., 1919	50
Bristow, E.	No other profession	Bright, Oxford Co.	7 Mar., 1913	74
Brodie, D. M.	No other business	Sudbury, Sudbury Dist.	17 April, 1903	51
Bromley, Samuel	Provincial License Inspector	Pembroke, Renfrew Co.	6 April, 1906	57
Brown, Edward B.	Municipal Clerk, insurance, etc.	Victoria Harbour, Simcoe Co.	7 Aug., 1912	54
Brunton, T. H.	No other business	York Co.	Mar., 1912	66
Butcher, W. R.	Grocer	St. Mary's, Middlesex Co.	15 Feb., 1918	49
Callwood, Harold	Insurance, Notary Public	Tilbury, Kent Co.	29 Nov., 1907	53
Campbell, Jas. H.	Barrister	St. Catharines, Lincoln Co.	July, 1898	49
Carrol, K.C., W. B.	Barrister	Gananoque, Leeds Co.	Feb., 1908	62
Carscallen, Andrew B.	Barrister	Wallaceburg, Kent Co.	26 May, 1916	57
Clark, George H.	Real estate and insurance	Orillia, Simcoe Co.	7 Aug., 1907	52
Clark, Joseph	Division Court Clerk	Ridgeway, Welland Co.	8 April, 1909	69
Clark, Wm.	No other business	Cardinal, Grenville Co.	3 July, 1905	78

Clay, Wm. H.	City Assessor	York Co	1908.. 22 Mar., 1912..	65
Cockburn, Jeremiah D.	Postmaster	Sturgeon Falls, Nipissing Dist.	1 Dec., 1916..	74
Cohen, Jacob	No other business	Toronto	28 Aug., 1918..	68
Colville, Neil	Physician and surgeon	Orono, Northumberland Co.	18 Oct., 1913..	53
Crawford, Robt.	County Treasurer	Brampton, Peel Co.	22 June, 1906..	70
Cook, Frank	No other business	Midland, Simcoe Co.	1 April, 1919..	57
Costin, Richard	Farmer	Princeton, Oxford Co.	18 Sept., 1905..	71
Coutts, John	Barrister	Thamesville, Kent Co.	30 Sept., 1913..	65
Coupland, Geo.*		Creemore, Simcoe Co.	20 Feb., 1920..	..
Craig, Daniel	Miller	Arnprior, Renfrew Co.	1 Oct., 1920..	66
Creasor, Alfred D.	Barrister	Owen Sound, Grey Co.	10 July, 1905..	58
Cross, Wm. H.	Farmer	Gravenhurst, Muskoka Dist.	18 Jan., 1910..	70
Cummings, Wm. R.	Miller	Eastview, Russell Co.	30 Dec., 1915..	47
Davidson, Douglas	No other business	Toronto, York Co.	17 Aug., 1916.. 22 Aug., 1918..	53
Davis, Samuel	Barrister	Cornwall, Stormont Co.	July, 1898..	53
Davis, Wm. R.	None given	Mitchell, Perth Co	Aug., 1906..	71
Dempsay, Samuel J.	Real estate agent	Cochrane, Temiskaming Dist.	1 Feb., 1920..	60
Denison, George T.	No other business	Toronto, York Co.	2 June, 1877..	81
Depew, Joseph E.	No other business	Sudbury, Sudbury Dist	2 Nov., 1910..	60
Devine, Matthew	Division Court Clerk and insurance	Renfrew, Renfrew Co.	Aug., 1912..	71
Dice, Samuel	Insurance and real estate	Milton, Halton Co.	8 Mar., 1907..	83
Dobie, Wm. G.	No other business	Port Arthur, Thunder Bay	11 Sept., 1890..	81
Drewry, Geo.	Barrister	Brighton, Northumberland Co.	17 Sept., 1913..	50
Dumble, David Wm.	Barrister	Peterboro, Peterboro Co.	1 May, 1881.. 29 Nov., 1882..	83
Eager, Wm.	Produce dealer	Morrisburg, Dundas Co.	20 Feb., 1909..	77
Elliott, Andrew	Barrister, but not practising	Sault Ste. Marie, Algoma Dist.	Oct., 1906.. 22 Feb., 1908..	57
Ellis, Peter V.	No other business	Toronto, York Co.	21 June, 1892..	72
Erskine, Wm. T.	Division Court Clerk and issuer marriage licenses	Rockland, Russell Co.	9 June, 1919..	58
Farnsworth, Henry	Township Clerk	Huntsville, Muskoka Dist.	15 May, 1912..	64
Farrell, Jas. M.	Barrister	Kingston, Frontenac Dist.	18 Oct., 1902..	53
Floyd, Wm. H.	No other business	Cobourg, Northumberland Co.	16 July, 1918..	60
Fox, Frederick J.	Notary Public and conveyancing	Wheatley	1 Oct., 1919..	57
Fraser, Alexander	Barrister	Niagara Falls, Welland Co.	29 July, 1908..	60
Fraser, Robert	Fire insurance agent	Russell	24 July, 1913..	56
Fry, John S.	Town Clerk	Dundas, Wentworth Co	2 Mar., 1916..	60
Goodwin, John	No other business	Welland, Welland Co.	9 May, 1917..	45
Gorman, Henry	No other business	Sarnia, Lambton Co.	June, 1899..	81
Gover, Howard	Insurance and conveyancing and Div. Court Clerk	Coldwater, Simcoe Co.	26 July, 1913.. 27 May, 1914..	42

* A letter from Coupland says he never accepted appointment.

LIST OF POLICE MAGISTRATES IN ONTARIO, JANUARY 1, 1921.—*Continued.*

Name	Other occupation	Address	Date of Appointment	Age last Birthday
Graydon, A. H. M.	Barrister	London, Middlesex Co.	10 June, 1913 D.P.M. 22 Aug., 1917 P.M.	40
Greig, J. C.	Mercantile	Seaforth, Huron Co.	3 Nov., 1916.	51
Gundy, William Eveleigh	Barrister	Windsor, Essex Co.	8 Nov., 1920.	53
Gunton, Robt. E.	Builder and contractor	Simcoe, Norfolk Co.	20 Dec., 1916.	57
Hall, Robt.	Insurance	Ridgetown, Kent Co.	7 July, 1919.	71
Halpin, P. K.	Barrister	Prescott, Grenville Co.	16 June, 1899.	54
Hamilton, Thos. C.*		Grand Valley, Dufferin Co.	6 Dec., 1905.	78
Hamilton, T. L.	Insurance and financial business	Listowel	11 May, 1920.	54
Hamilton, Wm.	Postmaster	Uxbridge, Ontario Co	3 Sept., 1918.	64
Hare, Geo. W.	Express and ticket agent	Tillsonburg, Oxford Co.	17 Feb., 1893.	78
Hart, Geo. C	Barrister	Winchester, Dundas Co.	9 Aug., 1917.	60
Hastings, David	Newspaper editor and Division Court Clerk	Dunnville, Haldimand Co.	29 Jan., 1915.	60
Hawkshaw, C. W.	Insurance and conveyancing	Lucan, Middlesex Co.	3 Mar., 1910.	47
Hewson, Wm. H.	Barrister and Town Clerk	Penetanguishene, Simcoe Co.	21 July, 1897.	62
Heyworth, A. F.	Hardware merchant	Hearst	9 Mar., 1916.	47
Hind, Alfred Frederick	Secretary, Oshawa Housing Commission; Q.M., Ontario County Regiment	Oshawa, Ontario Co.	13 April, 1919.	43
Hogg, Wm. A.	Journalism	Collingwood, Simcoe Co.	1 Jan., 1908.	61
Hollands, Charles J.	Insurance	Fort Frances, Rainy River Dist.	26 May, 1894.	64
Horsey, Wm. M.	No other business	Bowmanville, Durham Co.	14 Feb., 1992.	88
Hough, John Atwell	Mining recorder	Matheson, Temiskaming Dist.	About 1912.	39
House, Menno	Shoe merchant	Bridgeburg, Welland Co.	21 Nov., 1913.	57
Hunt, Francis	No other business	St. Thomas, Elgin Co.	4 Nov., 1903.	79
Hutchinson, J. W.	Postal service and farming	Port Rowan	Feb., 1916.	44
Jakeman, Walter A.	Township Clerk	Tp. Manvers, Durham Co.	14 April, 1908.	59
Jarman, Geo. L.	Purchasing agent for lumber company	Bancroft, Hastings Co.	24 Nov., 1905.	67
Jelfs, George F.	Barrister, but not practising	Hamilton, Wentworth Co.	18 May, 1893.	67
Jarvis, Joseph J.	Farmer	Mooretown, Lambton Co.	28 Feb., 1918.	58
Jephson, John Samuel	Manager, flour mills	Pickering	10 Mar., 1911.	48
Jones, Thos.	Insurance	Forest, Lambton Co.	13 Nov., 1902.	70
Jordan, Geo. A.	County Clerk	Minden, Haliburton Co.	26 Jan., 1917.	60
Kelly, Thos.	No other business	Petrolia, Lambton Co	19 May, 1916.	67
Kidd, Wm. J	Barrister	Ottawa, Carleton Co.	23 Mar., 1918.	60
Kinney, James Arthur	Barrister, solicitor (including conveyancing)	Kenora, Kenora District	10 May, 1916.	43
Kirkland, Joseph T.	Postmaster	Almonte, Lanark Co.	2 Oct., 1918.	53

Laidlaw, W.	No other business	Durham, Wentworth Co.	28 Aug., 1918	65
Langley, Oliver A.	Barrister	Peterborough, Peterborough Co.	9 Sept., 1914	49
Lawlor, Herbert Wm.	Barrister	Hawkesbury, Prescott Co.	14 Feb., 1900	57
Livingstone, Wm. C.	No other business	Brantford, Brant Co.	19 July, 1907 19 Oct., 1908	58
Lowes, Wm. H.	No other business	Rothsay, Wellington Co.	20 April, 1886	84
MacDougall, Duncan P.	Division Court Clerk	Maxville, Glengarry Co.	23 April, 1914	71
Mackay, J. T.	No other business	Sault Ste. Marie, Algoma Co.	13 Sept., 1910	65
Macnab, Chas.	No other business	Ottawa, Carleton Co.	20 April, 1917	78
Mactavish, Alexander A.	Barrister, etc.	Parkhill, Middlesex Co.	30 Mar., 1897	67
Major, Frederick Wm.	Notary Public, Town Clerk	Little Current, Manitoulin Island	3 Aug., 1917	41
Makins, Jno. A.	No other business	Stratford, Perth Co.	14 Sept., 1916	51
Massie, Jay Clinton	Manager, dept. labor for International Nickel Co.	Port Colborne, Welland Co.	27 Mar., 1920	42
Masson, Stewart	Barrister	Belleville, Hastings Co.	21 Feb., 1907 14 Aug., 1907	63
Matheson, Roderick A.	Barrister	Eganville, Renfrew Co.	3 Mar., 1905	67
Maxwell, Charles F.	Barrister	St. Thomas, Elgin Co.	21 April, 1915	64
McArthur, Chas.	Town Clerk and Treasurer	Burk's Falls, Parry Sound Dist.	11 Feb., 1907	64
McCormick, W. A.	Town Clerk and Treasurer, Clerk of Division Court.	Amherstburg	1 Oct., 1920	54
McKay, Samuel G.	Retired merchant	Ailsa Craig, Middlesex Co.	4 Aug., 1914	63
McKenzie, Daniel C.	Farmer	Glencoe, Middlesex Co.	16 May, 1913	63
McKinnon, Isaac F.	Carriage painter	Waterford, Norfolk Co.	15 Jan., 1919	63
McMillan, J. C.	Clerk of Division Court	Webbwood	28 July, 1913	51
Miller, Albert Osborn	Conveyancer, Notary Public, insurance agent and Clerk of Division Court	Avonmore, Stormont Co.	22 July, 1920	60
Moore, Francis D.	Barrister	Lindsay, Victoria Co.	19 Oct., 1906	72
Moore, George	Merchant	Parry Sound, Parry Sound	1 July, 1916	58
Moore, Henry Philip	Publisher, " Acton Free Press "	Acton, Halton Co.	5 May, 1920	62
Mosher, Benj.	No other business	Merrickville, Grenville Co.	15 June, 1906	87
Munro, Donald J. C.	Town Clerk and Treasurer and Division Court Clerk	Thorold, Welland Co	18 Mar., 1904	56
Murch, William Squire Rowe	No other business	Westport	27 July, 1920	61
O'Brien, Wm. W.	No other business	Pt. Arthur, Thunder Bay	30 Aug., 1906	60
O'Callaghan, E. J.	No other business	Arthur, Wellington Co.	11 Mar., 1913	83
O'Connor, James J.	No other business	Pt. Arthur, Thunder Bay	25 Aug., 1911	62
O'Rourke, Thos. A.	Barrister	Trenton, Hastings Co.	19 June, 1902	67
Page, Jas. Albert	Barrister	Brockville, Leeds Co.	3 Sept., 1918	58
Palling, Wm.	No other occupation	Fort William, Thunder Bay	11 May, 1906	60
Paterson, John L.	Barrister	Ingersoll, Oxford Co.	15 Dec., 1909	51
Patterson, Wm. W.	Dentist	Paris, Brant Co.	27 Jan., 1910	61
Pattullo, Joseph	Conveyancing	Orangeville, Dufferin Co.	8 Mar., 1888	85
Payne, Geo. A.	Barrister	Campbellford, Northumberland Co.	11 Jan., 1907 3 April, 1911	61
Payne, Wm. L.†	Barrister	Colborne, Northumberland Co.	12 Jan., 1911	73

* Says he is " too old."

† Has never acted, he says.

LIST OF POLICE MAGISTRATES IN ONTARIO, JANUARY 1, 1921.—*Continued.*

Name	Other occupation	Address	Date of Appointment	Age last Birthday
Peacock, William	Miller	Alexandria	31 Mar., 1914	40
Peden, A. R. G.	Town Clerk, Division Court Clerk	Carleton Pl., Lanark Co	11 April, 1918	71
Pinkerton, John B.	Traveller	Elgin	Spring of 1916	50
Poulin, Basil Roch	Newspaper publisher	L'Orignal	24 April, 1920	61
Preston, Daniel K.	Town Treasurer	Newboro, Leeds Co	7 July, 1915	73
Pronger, Robt. H.	Notary Public	Dryden, Kenora	18 May, 1914	62
Pumaville, M. S.	Barrister-at-Law	New Liskeard	20 May, 1913	48
Purcell, Edward J.	Hardware merchant and Division Court Clerk	Athens, Leeds Co	27 Jan., 1910	51
Purdy, E. H.	Seedsman	Port Perry	16 Mar., 1915	61
Padenhurst, Geo. A.	Barrister	Barrie, Simcoe Co	8 July, 1905	71
Rankin, Wm.	No other business	Napanee, Lennox and Addington	1 Sept. 1905	69
Reid, Chas. A.	Contractor	Goderich, Huron Co	28 May, 1918	48
Richards, J. A. T.	Notarial work only	Iroquois Falls, Temiskaming	10 Sept., 1920	34
Riggins, Chas. E.	Druggist	Beamsville, Lincoln Co	7 Mar., 1899	65
Robb, Isaiah	No other business	Palmerston, Wellington Co	6 Dec., 1909	69
Scott, W. W.	Township Clerk	Moorefield, Wellington Co	14 June, 1905	70
Shepherd, Edward H.	No other business	Niagara, Lincoln Co	25 Mar., 1911	69
Shields, Jonathan H.	No other business	Oakville, Halton Co	8 Mar., 1907	72
Simpson, Wm. J.	Wholesale fish dealer	Tobermory, Bruce Co	30 May, 1908	51
Smart, Francis H.	Grain and feed dealer	Kingsville, Essex Co	26 April, 1901	75
Sparham, Bayard E.	Barrister	Smiths Falls, Lanark Co	27 May, 1905	67
Stewart, James Albert	Manager, Woods Dept., Bruce Falls Co., Ltd.	Kapuskasing	14 Sept., 1920	39
Stewart, John C.	Insurance	Pembroke, Renfrew Co	5 Aug., 1911	64
Stewart, William*		Pelee Island		
Stoddart, Thos.	Town Clerk and Treasurer	Copper Cliff, Sudbury Dist.	14 June, 1905 5 June, 1913	54
Summers, John R.	No other business	Aylmer, Elgin Co	31 Dec., 1913	69
Taylor, Charles	Lumber dealer	Drumbo, Oxford Co	30 Oct., 1905	68
Taylor, Henry	Insurance and coal dealer	Perth, Lanark Co	11 May, 1899	75
Taylor, Wm.	Harness maker	Streetsville, Peel Co	15 June, 1906	77
Telford, John	Storekeeper	Hanover, Grey Co	6 Aug., 1906	72
Thistlethwaite, Fred. W.	County Registrar	Vankleek Hill, Prescott Co	6 May, 1890	59
Treffry, Geo. H.	Conveyancing and Assessor	Otterville, Oxford Co	20 Aug., 1918	65
Trim, Chas.	No other business	Milverton, Perth Co	20 Dec., 1905	66
Trueman, Richard Morgan	Insurance agent	Strathroy, Middlesex	10 Sept., 1920	45
Vance, John F.	County Clerk	Hamilton, Wentworth Co	20 Nov., 1919	47
Vaughan, Amos C.	Notary Public and Associate Coroner	Sioux Lookout, Kenora Dist.	6 April, 1910 2 Sept., 1913	67

Watt, Frederick	Barrister	Guelph, Wellington Co.	1 June, 1913	38
Weegar, Silvanus	No other business	North Bay, Nipissing Dist.	8 Sept., 1908	68
Weir, J. J. A.	Barrister	Kitchener, Waterloo Co.	11 Oct., 1899	60
White, Henry	Barrister, etc.	Port Hope, Durham Co.	17 June, 1910	69
Whiting, W.		Torrance		
Whittington, John P.	Township Treasurer and Division Court Clerk	Blenheim, Kent Co.	9 Aug., 1917	60
Wholeham, Thomas	Factory employee	Chesterville, Stormont, Dundas and Glengarry	About 1916	67
Williams, Jas. F.	Physician	Bracebridge, Muskoka Dist.	6 May, 1915	62
Williams, Levi	Township Clerk and conveyancer	Picton, Prince Edward Co.	19 Jan., 1910	77
Williams, Thos. E.	Barrister	Thessalon, Algoma Dist.	12 May, 1905	65
Woodman, Arthur C.	Conveyancing, insurance and Clerk of Town	Drayton, Wellington Co.	15 Oct., 1902	67
Willis, Jas. E.	No other business	Whitby, Ontario Co.	22 Aug., 1917	57

* Says he has not acted under his appointment.

Number between 80 and 90 years of age	10
" " 70 " 80 " " "	33
" " 60 " 70 " " "	72
" " 50 " 60 " " "	47
" " 40 " 50 " " "	23
" " 30 " 40 " " "	5
	190
No age given	3
	193

Average age reported, 61

REPORT

OF

ROYAL COMMISSION

ON

UNIVERSITY FINANCES

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
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1921

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Report of Royal Commission on University Finances

To His Honour the Lieutenant-Governor:

The Commissioners appointed by Your Honour to inquire into and report upon certain financial matters relating to the Provincial University; Queen's University, Kingston, and Western University, London, have completed their labours, and respectfully beg to report to Your Honour the results of their inquiries and such recommendations in regard to financial aid as they deem to be warranted, together with certain other recommendations which they consider advisable.

The terms of the Royal Commission dated the 27th day of October, 1920, authorized and empowered your Commissioners "(*a*) to inquire into and report upon a basis for determining the financial obligations of the Province toward the University of Toronto, and the financial aid which the Province may give to Queen's University of Kingston and the Western University of London; (*b*) to recommend such permanent plan of public aid to the said Universities as shall bear a just and reasonable relation to the amount of the legislative grants to primary and secondary education, and (*c*) to make such suggestions on any of the above subjects as may seem, in the opinion of the Commission, to be desirable."

Course of the Inquiry.

In order that the inquiry might be as careful and comprehensive as possible, it was decided to request the representatives of the Provincial University and of Queen's and Western Universities to appear before your Commissioners on certain dates, and to present full information on their financial resources and needs, on their academic work, on the number of their student body, and on any matters of general University policy on which it might be deemed desirable to consult them. Your Commissioners decided to visit each of the three Universities and to make themselves personally familiar with buildings, equipment, staff, actual conditions of work, and location of proposed new buildings. Advertisements also were inserted in the local papers of each city inviting communications from educational, industrial, scientific or other public bodies, which might desire to make representations to the Commission in regard to University matters.

We visited the Western University on November 18th, the University of Toronto on November 19th, and Queen's University on November 22nd, 1920. Representatives of the Universities and of various organizations connected with them appeared before us on the following dates:

University of Toronto, December 6th, 1920.
Western University, December 8th, 1920.
Queen's University, December 13th, 1920.

We desire to hear testimony to the zeal and efficiency of the members of the staffs of the various Universities whom we interviewed on our tour of investigation. We found them loyal to their institution, eager to make their faculty and department the foremost in the University, competent in scholarship, and in touch with the most recent advances made elsewhere in their special fields of learning. We received the fullest information from the authorities of the three Universities. We have received important statements from the Royal Canadian Institute, the United Farmers of Ontario, the Workmen's Educational Association, the Alumni and Alumnæ Associations of the University of Toronto, and from various individuals and deputations, who give us much information and many points of view. At the various sessions of your Commission a great deal of valuable testimony, oral and written, was presented.

VALUE OF EDUCATION.

Education is not only intimately bound up with social and industrial reconstruction, but, in a deep sense, is the most important and enduring side of post-war policy. Upon the extent to which a country develops and uses the innate abilities of its citizens, its future prosperity and permanence depend. The value of education to the nation has been realized afresh in these later days. This value is so great that it is the obligation of the State to provide full educational facilities for all its people. Only so can the healthy existence and continued progress of the State be maintained.

1. History shows the tremendous power of education over the minds and souls of men. The changes of centuries can be effected in generations, and national outlook, ideals and activities can be profoundly altered.

2. Education answers certain urgent human needs, loudly voiced in all civilized countries to-day. There is a world-wide demand for a wider distribution of wealth, for more leisure and increased interests, for more happiness in life, for more social community of spirit among all classes, for a further share in the power of management, both in industry and in government, local, national and international. The mental and moral atmosphere produced by the war has caused these needs to be more keenly felt by the great mass of the people, and has created conditions under which reforms can be effected rapidly. Education is the most valuable form of reserve wealth in meeting these requirements. It helps to secure the increased efficiency of management and labour, which increases output and makes possible shorter hours. It enables men to utilize more wisely the resources of science and to improve the organization of industry whereby a greater volume of wealth is produced for distribution. It is the best method of bringing men easily and closely together in a social community. It supplies the knowledge and the trained mind which enable men to take an effective part in helping to govern an industry, a town, or a nation.

3. In education three aspects of the human being must be duly regarded.

(*a*) He must be trained *as an individual.* This education contains a physical, a mental and moral area. It seeks to make the pupil *strong in body*, so that he may observe well, hear accurately, speak effectively and musically, and use skilfully his hands, the most marvellous of all tools. It seeks to give him *mental cultivation*, so that he may have a disciplined mind, a ready command of intellectual resources, a power of application and concentration, a real love of knowledge, and a genuine delight in good literature. It seeks to create ideals and to *develop character.* Right education broadens, deepens and refines human life. It makes its possessors citizens of the world; it opens the gates of the past and the windows towards the future; it widens horizons and fills lives with new interests and new pleasures.

(*b*) He must be trained *as a worker.* Education is needed, not only to enable the individual to live the fullest, most interesting and happiest life possible, but also to discern what in life has to be done and what is the best way to do it. No satisfactory technical education can be given except to those who have already had or are receiving a good general education. Technical education gives the special knowledge and skill required for work. It enables a man to understand the various processes in his work; it stimulates him to use his brains and invent contrivances; it ought to make his work pleasureable and educative to himself. Education, applied to industry, commerce and the development of the natural resources of the country, promotes industrial efficiency, commercial growth and the increase of material wealth. In addition to the higher things of the mind and soul, there are material and measureable rewards of education. Among all varieties of race, and amid varying conditions of climate, natural resources, geographical location, economic and social environment, in every case it can be demonstrated that an educated people produce much and amass wealth, while an uneducated people, under the same conditions, produce little and save less. Without educated brain and skilled hands, the fertile soil, the timbered land, water-powers and mineral deposits, must lie idle or be ignorantly squandered. National wealth and industry are directly related to education and must become more and more dependent upon it as civilization advances. The education of the individual is becoming an equally important factor in individual efficiency and success in the various departments of practical life. In a land of great natural resources like our own, education is indispensable to their proper conservation and use.

(*c*) He must be trained *as a citizen*. Democracy makes greater demands on the intelligence of its citizens than does any other form of government. Only a well-educated democracy can prove to the world its superiority. Democracy must win the key of knowledge before it can safely wield the sceptre of power. A sound and complete education is the best preservative of democratic institutions and the best remedy against anarchic and revolutionary movements.

On all counts, the case is made good for a system of education which concerns itself with all classes in the nation. To establish and maintain such a system the State must make generous financial provision. Schools are not a charity, but a paying investment. Education is " the debt which maturity owes to youth." The wise State will seek to pay that debt with no niggard hand.

All Grades of Education Interdependent.

Primary, Secondary and Higher Education are part of *one* great educational effort. The goal of that effort is to develop a free human being who has been prepared for the responsibility of deciding things for himself. Each division of our educational system has its share in this preparation. The same pupil may pass through all grades. The teachers of the Primary Schools are taught in the Secondary Schools by teachers who have themselves been taught in the Universities. The effectiveness of University work largely depends on the excellence of the Preparatory Schools, and the whole tone and atmosphere of the Secondary Schools are created by their University-trained staffs. The character of the work in the Primary Schools is ultimately influenced or even determined by the ideals of the University. The interests of primary, secondary and higher education are interdependent and interlocked. No one interest can be impaired without weakening the others; none can be improved without strengthening the others. To set the financial claims of one *against* the other would be to impoverish all.

THE UNIVERSITY AS THE SERVANT OF THE COMMUNITY.

The aim of a University is not to develop a self-centred culture, but to use culture, knowledge and discipline in the service of the community.

1. Universities are the natural centres and culminating points of the educational system of a country. Their influence is felt through every part of the system, and even beyond it, in the continued and voluntary education of adults.

2. Their primary function is to provide a liberal education. A University which trains only narrow specialists is in danger of losing sight of one of its highest functions. The production of the specialist is secured at too high a cost if it is gained by sacrificing breadth of outlook and zest and range of intellectual curiosity about all things that contribute to the knowledge or enrich the life of man. A certain width of view is essential to the reality of academic culture. The mission of the University is to represent the organized will and power of the community in promoting all that makes for intellectual advancement and moral elevation.

3. Universities train men for leadership in every sphere of work. In a period of world-wide reconstruction, leaders must possess clearness of thought and adequate knowledge. This the University may be expected to supply. The University-trained man ought to contribute to his country, as a citizen: (*a*) the *spirit of progress,* which hopes, because it is always seeking to better conditions by knowledge and skill; (*b*) the *spirit of moderation,* which is cautious, because it resists the vehemence of one-sidedness and the impulse to grasp at hasty expedients; (*c*) the *love of truth,* which realizes the worth of thorough and systematized knowledge, which keeps an open mind to new ideas, and which holds preconceptions in due control. Men possessed of this true academic spirit can help to form a sound public opinion and can furnish skilled leaders in commercial, industrial, social, political and religious movements.

4. Universities train the teachers in the Secondary Schools and in many of the larger Primary Schools. Through this group of graduates the University reaches the whole educational system. The quality of instruction and the mental stimulus given by the Secondary School teachers largely determine the intellectual interest, the public spirit, the literary tastes and the moral tone of each generation as it passes from adolescence to manhood. The quality of these teachers and their power to inspire fine ideals in youthful minds depend in turn on the spirit which their University has breathed into them, and on the high conception it has given them, of what intellectual energy and enjoyment really mean.

5. Universities are the visible evidence of the homage which the State pays to learning and science; the symbol of how much there is in life beyond material development and commercial success. They should be the homes of great ideals; the nursing-mothers of great characters. They seek to extend the realm of knowledge apart from any utilitarian value, confident that all knowledge increases the power of man. They teach those who are entering on life to think of the past and the future, as well as of the present, and to make the achievements of the past a challenge to the improvement of the future.

6. Universities provide the highest training in the application of knowledge to all departments of life. From the national point of view, this aspect of University work is of great practical value. We need the trained scientist to discover the full extent of our natural resources and to improve and develop our methods of industry. We need skill, vision and informed organizing ability to turn our agricultural and commercial possibilities into realities. We need the clearest

reasoning and most effective action of our best-trained citizens to deal with our economic problems, social difficulties and political tasks. Universities should focus whatever information science can provide for any form of service to the State. They should place their knowledge of economic history and of economic experiments in all countries at the disposal of administrative officials and Legislatures. From the trained staff of a University should be furnished investigators in the scientific, economic or historical fields, whose extent of knowledge and mastery of method would make them helpful colleagues of practical men charged with making such inquiries.

7. Universities should seek out and develop unusual human talent, in whatever walk of life it may be found, and make it available for the service of the State.

The University, in fine, is one of the chief organs of the higher life of the State. Its facilities should be brought within reach of the greatest possible number of the people.

THE PRESENT UNIVERSITY SITUATION IN THE PROVINCE.

1. The existing situation is partly the legacy of past controversies and partly the result of present demands. The story of University development in the Province is long and varied.

(*a*) There was at first a State-established denominational University, the religious restrictions connected with which led to the founding of other denominational institutions.

(*b*) For some years the State University, freed from denominational control, co-existed with independent denominational Universities.

(*c*) Then Victoria University, and later Trinity University, federated with the Provincial University.

(*d*) The present situation is that a Federated State University exists, and outside it are two independent, undenominational Universities, Queen's and Western, and two independent denominational Universities, McMaster and Ottawa.

2. The University of Toronto is the creation of the Province. It is controlled on its business and administrative side by a Board of Governors, all of whom are appointed by the Government, and all of whom are removable by the Government at the expiration of their terms of office. They represent the Government, which in turn represents the Province. Its financial support comes in largest measure from the Province. Its sources of income are: (*a*) an endowment which yields over $60,000 a year, originally granted by the State; (*b*) the fees of students, purposely kept as low as possible, amounting in 1919-20 to $382,000; (*c*) income from dining hall and residences, amounting in 1919-20 to $56,860; and (*d*) the Government grant, which is partly statutory (amounting to $500,000) and partly voted annually, to cover the expenditure beyond the yearly statutory grant.

The buildings of the Provincial University have been erected partly from the original endowment, partly out of income, partly from special legislative grant, and partly from private benefactions (such as the Household Science Building, the Connaught Laboratories and Hart House).

3. Queen's and Western Universities have for some years received annual grants from the Government on account of the School of Mining at Kingston and the Institute of Public Health at London. More recently they have applied year by year for special grants to aid their Arts, Science and Medical Faculties. These grants have been given, but on no settled basis or policy.

(i) The income of Queen's University is derived from (*a*) students' fees, about $145,000; (*b*) endowment of $1,791,495, yielding in 1920-21 about $97,000, and (*c*) Provincial grants, in 1920-21, $165,000. The buildings of Queen's have been erected partly by private or local benefaction, and partly by grants from the Provincial Government.

(ii) The income of the Western University is derived from: (*a*) students' fees, in 1920-21, $26,000; (*b*) grant from the City of London, $55,000, and (*c*) Government grant, $84,000. There is no general endowment at present, but there are definite prospects of securing such a fund in the near future. The new Medical Building has been erected from local sources at a cost of $450,000. The Public Health Institute—an integral part of the University—was erected at a cost of $60,000 by the Province. The other work of the University is carried on mainly in rented or donated premises.

SUMMARY OF RECOMMENDATIONS.

We summarize our principal recommendations:

1. That for the maintenance of the Provincial University and of University College there be restored the basis of support in the Act of 1906, viz., a yearly sum equal to 50% of the average of the succession duties for the three preceding years; the percentage to be subject to such conditions as are set forth in the Section of the Report dealing with this subject.

2. That annual maintenance grants be paid to Queen's and Western Universities out of Consolidated Revenue, and that these grants be readjusted every five years by a Court of Reference to be appointed by the Lieutenant-Governor in Council.

3. That grants on Capital Account for buildings urgently needed be given to the Provincial University ($1,500,000); to Queen's ($340,000); to Western ($800,000).

4. That if increased revenues for education be required in future, the Government consider the advisability of levying a direct tax of one mill on the dollar on the municipally-assessed value of the rateable property of the Province (excluding incomes), ear-marked for general educational purposes.

5. That in any University aided by State funds no new faculty be established and no new building (paid for by public funds) be erected without the consent of the Lieutenant-Governor in Council.

6. That a University Day be provided for in the Legislature, on which the Heads of the various Universities shall appear to report on their work.

7. That a Department of Graduate Studies and Research be organized in the Provincial University as soon as practicable.

8. That if the future increase of candidates seeking admission to the Universities should be so great as to make still further increase of staff and buildings necessary, the Department of Education and the Universities of the Province be asked to consider the transfer of the present First-Year University work to the Collegiate Institutes and High Schools.

9. That University College be given its historic academic building, and that the Administrative Offices be transferred to a new building.

10. That certain necessary additions be made to the buildings of the Ontario College of Education.

11. That certain extensions be made to the Royal Ontario Museum.

12. That the Provincial University continue to be controlled by a Board of Governors, and that such Board be truly representative of the whole Province.

ADEQUATE SUPPORT OF THE PROVINCIAL UNIVERSITY.

We believe that a united public opinion will be created in support of Higher Education in the Province by two broad lines in policy:

(*a*) Adequate support for the Provincial University, for which the State is primarily and solely responsible.

(*b*) Such reasonable support to the other two Universities as will be just to them and to the districts of the Province which they specially serve, and will extend the benefits of Higher Education to a wider circle of students.

It is a primary obligation upon the Province to make the Provincial University worthy of the intelligence, wealth and resources of the Province. Nothing but a University of first rank should be the crown of our educational effort.

1. The Provincial University stands in a unique relation to the State. It was established by public funds; it has been maintained by public funds. It is controlled by a Board appointed by the Government. It has for generations been recognized by custom and by legal enactment as the special property of the State. No change in its formal status has been suggested or recommended. Its unique position is acknowledged by all. The State has legal and moral obligations to it. The terms of our Commission recognize "the financial obligations of the Province toward the University of Toronto."

2. The Federation Act of 1887 and the University Act of 1906, which fully recognized the fact of Federation, really make a *contract* between the State and the Federated Universities. The Province obligated itself to provide ample facilities and financial support for the State University, in which the Federated Universities would fully participate. Federation was a compact, according to which the Province undertook to maintain the Provincial University in a state of high efficiency. One of the chief arguments used in the interests of federation was that, through the disappearance of distracting counter ecclesiastical interests, the Legislature of the Province would be free to make generous grants to the Federated Provincial University. The compact still stands. The contract remains.

3. The University has grown to be one of the largest and best on this continent and in the British Empire. Its degrees are recognized as representing excellence of standard and thoroughness of training. For the money granted to it, it has given a good return in scholarship, culture, scientific achievement and public service.

4. Its present work and needs fairly justify full measure of financial support. It is a popular delusion that the University is an independently rich and prosperous corporation. Practically all it has the State has given or is giving. That the State is not giving an inordinate amount is seen by a comparison (made elsewhere in this Report) of the money granted by American States of similar population and resources to their State Universities, with the annual grants made by this Province to its Provincial University.

(*a*) The *pressure of numbers* has steadily increased. The total registration to-day is over 4,600 in all faculties. The attendance in Arts is larger than ever. The registration in Arts and Applied Science will probably be maintained; that in Medicine will in due time be slightly reduced; there will assuredly be a great increase in the new Department of Commerce, and in post-graduate work. This registration is practically in the great central University Faculties of Arts, Applied Science and Medicine. Dentistry and Law are not included, as they are in many American institutions, nor are the students in correspondence and summer courses counted in. We describe elsewhere a method of checking increase of numbers by raising standards; but even if this proposal be carried into effect, the problem of increasing numbers will remain. It is the inevitable problem arising in a country where there is a keen desire for the best in education, and where the possibilities of developing natural resources are fully recognized. This natural growth of the student body creates its own demand for increased financial expenditure.

(*b*) The increase in numbers has called for an *increase in staff*. Efficient teaching cannot be given when classes are so large as to destroy personal contact between professor and student. The staff of the University has never been large enough to free those of its members who have the aptitude for original investigation, from elementary teaching and routine work.

(*c*) We have dealt later with readjustment of salaries by the University authorities, necessitated by increase of staff and cost of living.

(*d*) *Faculties have been enlarged* and *new faculties have been established*: (i) The Faculty of Applied Science comes into close relation with the various material developments of the country. Engineering—a practical scientific education—is more than ever applicable to general business and commercial pursuits. The swing at present is towards Chemical and Electrical Engineering. This Faculty teaches both theory and practice in College, and during vacation uses the great outside world of mining or industry as the real laboratory. We have only begun to realize the value of the services which such a Faculty can render in developing the natural resources of our country. (ii) The Faculty of Medicine is well-staffed on the side of the scientific preliminary studies. The Eaton gift and the Rockefeller gift make possible developments in the Clinical departments. The health of the Province is of such vital moment that wise expenditure on the thorough training of members of the medical profession is amply justified. (iii) The Faculty of Forestry plays a great part in the material progress of the Province. The forests have yielded larger revenues than the mines to the Provincial Treasury. Scientific care of our forest resources will assure a permanent productivity. The University Faculty deals with a wider and different field than is covered in the Ontario Agricultural College at Guelph. Both the basic sciences and the practical experience of the forests are required to produce the type of forester whose life-work it will be to conserve and develop the forest resources of Canada. (iv) The new Department of Commerce will cover a range of subjects not heretofore generally included in a University curriculum, and will train students to deal with the problems of actual business and finance. (v) While we have due regard to these demands of applied science and professional training, we do not forget the indispensable basis of liberal arts and pure science. The "humanities," the "liberal studies," represented by the College subjects and the non-laboratory University subjects, must not be overwhelmed or thrust aside. They should be maintained in their central and fundamental position. The "human" is the basis of the "professional."

(*e*) New *buildings* are required. Without these, important departments of the University will be seriously crippled. We have indicated elsewhere which of these are, in our judgment, of most immediate urgency. For University College and the non-laboratory University subjects, building additions should be made as soon as possible. The conditions of overcrowding, inconvenience, bad light and poor ventilation found in many of the improvised lecture rooms call for prompt and drastic remedy. Administration, Forestry and Anatomy require new housing and proper facilities. To maintain the health of the women students, a matter of supreme importance, a suitable gymnasium should be provided. The income from the Rockefeller gift is conditioned on the erection of the new Anatomy building. Other buildings will doubtless be added in due course. When the complete building programme of the University (found in detail in the Appendix to this Report) is carried out, adequate accommodation for many years will be secured.

(*f*) *Laboratories and Equipment* are a necessary part of the general expansion. We have found, on examination, that the existing facilities are being used most economically and up to their limit. The necessary additions should be provided both for undergraduate and graduate work.

(*g*) The *Library* is the laboratory of the non-scientific departments. It calls for larger annual expenditures. As post-graduate work is developed the Library will require additional space and equipment.

5. One of the most cogent reasons for adequate support of the Provincial University is the necessity of developing in it a worthy post-graduate department. This will be the distinctive line of advance in the future. The Executive Committee of the Ontario Division of the Canadian Manufacturers' Association has pertinently expressed itself on this phase of the question.

> "The Association recommend that it is desirable that the Universities be maintained at a high standard of efficiency for undergraduate work; that the Provincial University should be maintained at a standard equal to the best University standards on this continent, with regard to undergraduate, post-graduate and research work; and that with respect to the higher branches of University work the resources available should be concentrated in one University."

6. The Provincial University has grown to be one of the great factors in the intellectual and material life of the people. We recommend later on a yearly statutory appropriation, which, we believe, will meet its present requirements and provide for inevitable expansion.

THE CASE FOR QUEEN'S AND WESTERN UNIVERSITIES.

In past years conflicting claims between various institutions of higher learning kept public opinion unsettled, and have to some degree hindered the formation of a substantial body of support behind the University work of the Province. The federation of Victoria and Trinity Universities with the Provincial University did much to secure public support for higher education. The making of regular grants to Queen's and Western on the basis of co-ordination of effort and avoidance of unnecessary duplication, will rally the whole Province to the aid of University training. We wish to record that the representatives of the State University have expressed cordial goodwill towards the other Universities, and that the representatives of Queen's and Western have displayed a like spirit towards the University of Toronto. Indeed, all have agreed on the necessity of building up a strong centre of well-organized post-graduate work in the State institution. The paramount question in all our conferences has been, "What is the most effective use that can be made of public money spent for higher education?"

In the future further facilities for Higher Education in the Arts Department may have to be provided in other parts of the Province. When that day comes, we believe that new Universities should not be established, but that colleges, located in convenient centres, should be linked up with existing Universities.

We recommend that definite sums for five years, to be readjusted at the end of that period, be granted to Queen's and Western for annual maintenance, and that block grants be made on Capital Account for buildings needed in the immediate future. The details of these grants are given in later sections of our Report. The grounds for our recommendations we here set out in general terms:

1. Assistance has already been given by the Province to both Universities in respect of buildings and of maintenance. War exigencies led to largely increased grants. It is most desirable, from the standpoint of the Province and of the Universities, that a definite policy be laid down. The Province would know its liability and the Universities the extent of their income.

2. The demands upon the Universities, due to increasing numbers of undergraduates and evidencing a growing desire for higher education, have come at a time of abnormal cost of living and of shrinkage in private sources of benefaction, due to heavy taxes on income and profits and to succession duties. The work of the Universities is essential to the well-being of the State. If private resources no longer suffice to support it, the State must be the benefactor.

3. All the existing University facilities in the Province are being utilized to the fullest extent to meet present requirements. None of them are idle or only partially used. If the facilities provided at Queen's and Western were not available, the State University could not meet all the demands. These, we believe, can be most economically and effectively met by using and extending the facilities of existing Universities.

4. The happy mean between centralization and decentralization can best be attained by the course we suggest. In post-graduate work, especially on its scientific side, there must be practical centralization of effort. In undergraduate work decentralization may prove a benefit. This benefit will be most marked in the Arts Faculty, which is the most cultural faculty, and indispensable to the proper mission of a University. Beyond a certain point, educational interests may be weakened by concentration. In a University the education of the student is carried on, not merely by the lecture-room and the laboratory, but also by personal intercourse with the professor and by the formation of personal friendships. In fact, a love of learning and good friendships are the best legacies a man carries away from a University. The smaller Universities have a valuable contribution to make in developing this individual factor in education. The College atmosphere or spirit is a most valuable part of the student's moral and intellectual environment, and this operates most powerfully where numbers are comparatively small. A University develops its own type and its own traditions. Queen's has a marked individuality. Western is already revealing its own peculiar genius. This diversity of University type enriches the national life.

5. We have carefully considered the possibility of wasteful duplication of teaching and equipment. This, of course, should be avoided. We have elsewhere suggested certain checks on the development of new faculties, which would tend to prevent such duplications. There would be wasteful duplication if plants stood idle or were but occasionally used; if expensive apparatus were provided in two or more centres, when all the available students could be accommodated in one place; but, as far as we have been able to determine, this kind of duplication does not, to any great extent, exist. The buildings and equipment are used to the utmost limit. The teachers are serving the needs of two or three faculties. The costs of operation are low enough to make it as economical to carry on work in these Universities as to provide additional accommodation in one central University.

6. The existence and situation of these two Universities in different parts of the Province bring the opportunities of Higher Education within the reach of thousands who would not otherwise obtain it. The great area and the diversified features of this Province suggest certain natural geographical divisions. The problems of Western Ontario—agricultural and industrial, thickly populated and centring around London—are different from those of Eastern Ontario, with its dairying and its great possibilities of power development from the St. Lawrence. Central Ontario has its own characteristics, and Northern Ontario, with its forests and mines, presents its own difficulties and opportunities. With a view to meeting the needs of these diverse districts and furnishing educational opportunity to as many as possible, the existing University centres seem to be strategically located. To a very large extent a University constituency is regional. Whether the University is rich or poor, of national reputation and influence, or almost purely local in range, the factor of local convenience is of determining importance. A study of the local sources of student attendance at our Canadian Universities and the inquiries of the General Education Board into College and University attendance in the United States, prove that the majority of the students of even the largest and most cosmopolitan Universities are drawn from within a comparatively short radius. The greater number of Harvard students come from the neighbouring country. The City of Toronto supplied 1,828 out of the 4,777 students enrolled in the University of Toronto for 1919-20, and the contiguous counties of York, Ontario and Simcoe supplied 183 more. In Western University 235 out of the 534 students registered come from the City of London. Twenty-two per cent. of the students in attendance this session at Queen's come from the City of Kingston and the County of Frontenac, and fifty-eight per cent. from Eastern Ontario. It is a fair inference from these facts that " the college must be taken to the people, if the people are going to derive the greatest benefit from the establishment of institutions of higher learning." The Legislature is warranted in aiding these Universities which serve great districts of the Province.

7. Both these Universities have done much to help themselves. Western is a young institution, but has already built its own commodious and well-equipped medical building. It receives a large yearly appropriation from the City of London. Queen's has a long and honourable history. It has raised a considerable endowment, and most of its buildings have been the gift of private liberality. Both Universities are in active operation, and can be made much more serviceable by additional financial assistance. In both Universities there is a spirit of loyalty and enthusiasm on the part of professors and students. The necessity for self-help has evoked an academic allegiance which only sacrifice for a good cause can create.

8. These Universities have the needs that are common to most institutions of higher learning to-day. They require increased salaries for the staff, increased equipment and additional buildings.

(*a*) Queen's is fairly well equipped with buildings. We recommend grants for the University's share of a new heating plant (which will also serve the enlarged Hospital); for a new and sorely-needed Library building, and for various additions, repairs and equipment. The whole institution is carefully and economically managed.

(*b*) Western has to face the heavy task of providing new buildings for its Arts Department. These are essential to its growth and efficiency. We recommend a capital grant towards the Arts Buildings. In no other way can we see a possibility of the speedy erection of buildings absolutely necessary for the work of the

University. Local financial help will still be required, and is being given on a large scale, to provide for the approaches to the new site, to put the grounds in order, and to erect dormitories and a gymnasium.

9. Queen's has made a noteworthy contribution to the life of the Province. It has provided higher education for many men of moderate means and keen intellectual ambition. It has created a student tradition of hard work, thrift and maturity. It has had an extraordinarily large share in educating the teachers of the Province. It has been marked by enthusiasm and initiative. It has always counted among its professors some of the most famous and inspiring of University teachers. Its services in the past and its good work in the present are worthy of financial aid from the Province.

10. Western is situated in the heart of one of the wealthiest and most populous agricultural and industrial parts of Ontario. Western Ontario has an estimated population of 780,000, about one-third of the population of the Province. Its municipal assessment is one-third of the whole Provincial assessment. It contains one-third of the Secondary Schools and more than one-third of the Secondary School population of the Province. It has aroused strong local enthusiasm for its support. It can supply the facilities of higher education to hundreds of students who are seeking it at a moderate cost and in the vicinity of their homes. Even under the present hampering conditions, the student body in Arts has increased at the rate of 66⅔% per annum for the last three years. Its Faculty of Public Health has been a pioneer, and is now carrying on valuable pathological researches. It can stimulate all the educational activities of Western Ontario by Summer Schools, by extension work, by library facilities, as well as by the direct influence it wields through its graduates and undergraduates. Its initial achievements and its wonderful opportunities justify a substantial measure of public assistance.

Government Supervision of Universities.

1. As Higher Education has in cost outgrown the power of private individuals to give it adequate support, it must appeal to the State. The State, which gives the financial support, has the right (*a*) to determine how this education may be most effectively and economically carried on, and (*b*) to exercise supervision over projected developments involving financial outlay.

2. The supervision of the expenditures of the Provincial University has been secured through a Board of Governors appointed by the Government, and through the submission of the detailed expenditures to the Legislature in the Annual Report of the President.

3. To the proposal that the Board of Governors of the University of Toronto be abolished and direct political control over the University re-established, your Commissioners have given most careful consideration; but we cannot approve it. We feel bound to agree with the views of the University Commission of 1906, which on this subject reported as follows:

"To administer the affairs of a great University with vigour and distinction, is well-nigh impossible unless the central authority is strong and devotes itself without ulterior interests and motives to the single purpose entrusted to it. The history of the Provincial University has demonstrated the disadvantage of direct political control. Despite the zealous efforts of statesmen and educationists, the University became on many occasions in times past the sport of acrimonious party disputes. Its interests were inextricably confused in the popular mind with party politics, although with these it had, in reality, little concern. The various Ministries which at different times since 1839 have tried to reconstruct the system of administration, instead of handing over to the authorities of the University the carrying on of its affairs, reserving to the State the power of controlling and resuming the trust if conditions rendered that proceeding advisable, burdened themselves with a responsibility which, in many respects, they were unfitted to discharge . . . A proposal to delegate the powers of the Crown to a Board of Governors is dictated by the desire to impart strength, continuity and freedom of action to the supreme governing body. It is in accord with the practice of other communities possessing State Universities."

We believe, however, that this Board should be truly representative of the whole Province, and we would urge that in future appointments to it the Government should have regard to this consideration.

4. The Lieutenant-Governor in Council may, according to the Statute of Incorporation, appoint four members of the governing body of the Western University. This right has been exercised, and four members of the Board of Governors have been appointed by the Provincial Government. The Lieutenant-Governor in Council has the right to appoint four members of the Board of Trustees of Queen's University, as representing the former School of Mining, but this right has not been exercised. We do not believe that Government supervision of the expenditures made by Queen's and Western Universities can best be secured through the appointment by the Government of members of the governing bodies of these institutions. The members so appointed will, in the nature of the case, be chosen from the locality of the University, and will primarily represent the University, not the Government. Other methods can be adopted which will combine the benefits of State supervision with the freedom and enthusiasm of local management.

5. We believe that there should be a general control of the expansion of the Universities by the Government. Absolute freedom of development by each University might conflict with a well-balanced system for the whole Province.

(*a*) No new Faculty in any of the Universities receiving State aid should be established without the consent of the Lieutenant-Governor in Council.

(*b*) No new buildings, paid for by Provincial funds, should be erected without the consent of the Lieutenant-Governor in Council, and without submission of the plans to the Department of Education for its approval.

6. The audited accounts of Queen's and Western Universities should be submitted to the Provincial Department of Education.

7. It is most desirable that the fullest publicity be given to the work of the Universities in the Legislative Assembly and throughout the Province. The representatives of the people who vote the necessary financial support should be brought into close touch with the Universities in general and with the Provincial University in particular. The Provincial University is not an institution remote and aloof, but one of the greatest possessions of the Province. The more its work is known and the closer its connection with the people, the greater will be the Provincial pride in its success and the more ready and generous will be its support. We believe that this publicity and sense of public ownership can best be secured by providing a University Day in the Legislature, when, on the request of the Minister of Education, the President of the Provincial University (or some representative appointed by the Board of Governors) should attend to make report on the past year's work, to give such explanations as may be asked, and to set forth the future

policy of the University. In like manner the Minister of Education should request the Heads of Queen's and Western Universities, or their duly appointed representatives, to appear before the House and report upon the work of their institutions. By this official statement of University needs and accomplishments public opinion would be informed and consolidated in support of the whole higher educational effort of the Province.

MAINTENANCE OF UNIVERSITY STANDARDS.

When Provincial aid is given to Universities, the Government has the right to require that there be co-ordination of work, and that unprofitable duplication be avoided. There should be the same standard of entrance and graduation, however much each University may express its own genius in the development of courses. The Department of Education, by its academic requirements for Specialist teachers, requires a common standard of excellence.

RESEARCH AND GRADUATE WORK.

Consideration must be given to the provision of proper facilities for research and to the establishment of a Provincial institution for post-graduate study. This will mark a further development in Higher Education in Ontario.

1. The Great War opened the eyes of the world to the possibilities involved in scientific research. By applying the results of science to industry, agriculture and commerce, Germany grew rich and strong before the war, and the application of these results to methods of warfare had an immediate and powerful influence on its course and its issue. In the present period of reconstruction there is a demand for research in every department of science. It is felt that only by the application of scientific principles to industry and the material resources of the world, can the physical wounds of war be healed and its financial burdens borne. The Governments of various countries have felt themselves called upon to spend large sums on the organization and development of Research. It is generally recognized that industrial development rests upon investigations in pure science. If scientific principles are to be successfully applied to the solution of industrial problems, there must be a group of men thoroughly trained in these principles; and if progress is to be looked for, a group of men mainly devoted to original investigation in all branches of science. The Universities are the institutions from which a supply of such men may be expected to come.

2. The modern University has a two-fold task. (*a*) It must give to its students a competent knowledge of what is already known, and (*b*) it must seek to add something to the existing stores of knowledge, and to train men for this work of productive scholarship and original scientific investigation. The Universities are the best places in which fundamental researches may be carried on. Although the former task will remain a chief duty of the University teacher, and must not for a moment be overlooked or disparaged, he cannot, if he is to remain a living and progressive scholar, ignore the latter. Indeed, the best teacher of undergraduate work will, as a rule, be a man who has some instinct for investigation and is systematically pursuing it. Some members of the staff will find their interest and reveal their chief capacity in the work of teaching; there are others whose primary interest is research; and still others whose interest is evenly divided. It would be difficult to secure or retain on a University staff men of the highest order of ability if they were not free to repay their debt to the learning of the past by making their own

contributions to the knowledge and needs of their time. Instructional work should be so arranged that the men who have the capacity for productive work and for the direction of research, should be freer to devote themselves to it.

3. A considerable measure of research work can be carried on effectively and inexpensively among the graduates of all Universities, as far, at least, as the work for M.A. or M.Sc. While scientific research may call for elaborate apparatus and heavy expenditure, there are other forms of research which can be carried on without large capital outlay and with little equipment beyond that required for ordinary instruction. These will be determined by the strength and outstanding ability of the men in special departments and by the limitations in finance. Research is fundamentally a matter of *brains* rather than *plant*, of *men* rather than *equipment*. The greatest desideratum is outstanding *men*. Research work raises the authority of the instructor in the eyes of his students, increases his own enthusiasm and stimulates him to seek out promising students who may enter the wide field of original investigation.

4. The organization of post-graduate work on a large and systematic scale requires concentration of University resources. Graduate work and research are closely allied, although not identical. An indispensable part of a graduate student's training consists in learning how to carry on investigation. One of the most important functions of a University is to select men who show an aptitude for research and to give them the training which will fit them for successful careers in scientific achievement and for doing the highly creative work of the community. In other words, the fully-equipped University should have a worthy department of Graduate studies. Hitherto we have not had adequate facilities for post-graduate work in any of our Canadian Universities. Those who have wished to pursue this work have been obliged to leave Canada and attend Universities in other lands.

We feel that no Ontario student should be under this necessity, but that in Ontario he should be able to receive as good guidance in graduate work and research, and as advanced instruction, as can be had on this continent. To meet this urgent and growing need we believe that in the Provincial University of this Province there should be organized and developed a School of Graduate Studies. The beginnings have already been made. This post-graduate work will demand further library and laboratory equipment; but, above all, it will demand outstanding men on the professorial staff; men of inspiration, men with the instinct for original investigation, men with time free from elementary teaching. We believe that the financial provision we are recommending for the Provincial University will make possible a reasonable development in research and graduate work. We believe that if the opportunities for this advanced study are provided in our own Provincial University, many of our students from Universities in Ontario and in other Canadian Provinces will be attracted hither and retained for life service in Canada. In the past some of our ablest men have remained in the lands where they obtained their post-graduate education. Canada needs her best sons to redeem the opportunities of her golden future. The costs of a graduate department are proportionately greater than those of undergraduate departments. With our limited financial resources it would be the part of wisdom to concentrate on building up one great post-graduate University—our Provincial University—which will be worthy of Canada, and which, through the adoption by the various Ontario Universities of common standards of entrance and graduation, will make possible the co-ordination of the whole provincial effort in higher education.

5. In developing a department of research and of graduate studies we repeat

that the vital requirement is men with aptitude for original investigation. Such a department could be created by utilizing existing members of the staff possessed of the necessary qualities, by freeing them from elementary teaching and by selecting new members of the staff with a special view to their research capacity. It is quite possible to have a University over-equipped with facilities and under-equipped with men. Our inquiries lead us to the conclusion that every research man should do some teaching. It is desirable that teaching be not divorced from research, nor research from teaching. Professors might serve in both undergraduate and graduate departments. There is no better human material than the Canadian youth. Out of their undeveloped intellectual resources may be produced creative leadership in every department of knowledge.

6. If research and graduate work are to be properly developed, scholarships and fellowships must be established. These would enable selected students to continue their studies at a time when such continuance is likely to yield the best and speediest results, and would attract to the Provincial University of Ontario men from all parts of the Dominion. In the establishment of such scholarships private beneficence would find a fruitful field for investment and public money could be profitably employed.

7. There are many industrial, historical, scientific and economic problems that are distinctively Canadian. These should be a main subject of investigation in a great Canadian University. The problems for research, whether in science, literature or history, should be worthy of the time and mental travail spent upon them.

SALARIES OF UNIVERSITY TEACHERS.

1. Education is one of the most important processes carried on by the organized State. The value which the citizens of a democracy place upon education is a good index of its vitality and probable permanence among them. This value may be measured by two standards: (*a*) the status in the community accorded to the teaching profession, and (*b*) its material rewards. How does teaching rank in public esteem with Law, Medicine and Engineering? Are teachers of any degree called upon to play a part in functions outside their daily professional routine? Are the salaries of teachers sufficient to lift them above the level of financial anxiety, as they discharge one of the most difficult, delicate and divine tasks in the community? It is not possible to give definite and accurate answers to these questions. Merely to put them will give grave cause for reflection and action. If the teaching profession is to be kept vital there must be life and growth in the teacher. The teacher cannot remain in a rut. The teacher, to do his best work, must, as it has been well said, "irrigate the minds of pupils from a running stream, not from a standing pool." Study, mental recreation and travel are almost as essential to "the gentle art of keeping alive" mentally as food is essential to the body. The teacher's salary should be sufficient to provide for both bodily and mental needs. No teacher can give effective service if he is depressed by financial anxieties and a sense of injustice. What has been said is a plea for adequate salaries for good teachers in the realm of Higher, Secondary and Elementary education.

2. We would apply these general principles to the case of University teachers. Perhaps the most critical question now before the University and College public in America is that of salaries. The American Bureau of Education has issued a bulletin concerning the present status of salaries in 401 Universities and Colleges in

the United States. This bulletin declares that the general level of the salaries of College officers and teachers is far below what it was ten years ago. Financial efforts are now being made over the whole continent to raise the salary level. We believe that the recently adopted scale of salaries in the Provincial University should be maintained. It is now fairly up to the level of salaries in American Universities of similar rank. The salaries in Queen's and Western have also been placed upon a reasonably satisfactory level. In recent years on this continent many teachers in Universities and Colleges have gone into various departments of business at salaries far in advance of their former stipends, chiefly because they could not live in decency and comfort on the meagre amounts paid them by educational institutions.

3. The remedy for the situation is largely a financial one. Universities, however, must not expect successfully to compete, in point of salary, with industrial corporations. University teachers have compensations which do not fall to the lot of people in business life. The salaries of University teachers should be on an adequate scale.

(*a*) The scale of salary represents recognition of the real value of higher education.

(*b*) From the standpoint of the professor, an adequate salary gives him freedom for that continued study which is essential to effective work.

(*c*) From the standpoint of the University, adequate salaries mean (i) *a contented staff*, and, therefore, a more efficient and enthusiastic staff; (ii) *a staff kept at a high standard.* If salaries are low, the abler men will in time be called to other institutions and it will be impossible to induce the best type of scholar to go into academic work. In seeking to secure or retain good men, the Universities must in some degree be affected by the competition of industrial and commercial corporations; (iii) *a vigorous, influential and productive University.* Great teachers make a great university. If, through low salaries, the staff deteriorates, the welfare and progress of the University are unfavourably affected. The number of teachers who inspire students and really give tone to a University is never large.

(*d*) From the standpoint of the State, it is ultimately suicidal to lose the teachers of science from the place where scientists are trained. The professor is training younger men in scientific principles and applications and is himself increasing by investigation and experiment the bounds of knowledge. He is providing a supply of scientific men to take the place of himself and his contemporaries when he and they pass away. By the drain from collegiate institutions, the industries themselves would presently suffer. Who would train the future students of Pure and Applied Science? A serious diversion of teachers from the Universities would be a real calamity to the country. The country cannot well get on without science and a continuous supply of new knowledge and new scientific men.

4. While automatic salary increases may profitably be made in the lower grades of the teaching staff, we do not think it advisable to make such increases in the salaries of professors of highest rank. There should not be absolute standardization of the salaries of full professors. Increases should not be made merely according to length of service. There might be an ample minimum, but the maximum should be reserved for those who have either done real work in extending the realm of knowledge or are possessed of singular power of teaching. The law of salary by seniority has weakened many a University. The Universities should be free to offer a few salaries above the average to secure men of special distinction. These would be the prizes of the profession, which could be won by the very best men for the very highest work.

5. Universities are not subject to any system of government inspection, such as obtains in relation to elementary and secondary schools. The Universities—as the adult educational centres of the Province—maintain their own standards and supervise their own teaching. We believe that this work of internal supervision is of vital importance to the health and effectiveness of the institution. Academic freedom of utterance is a rightly prized possession: but academic indolence or infirmity cannot be too quickly checked. Some regular method should be adopted and kept in operation whereby the actual work of instructors may be known and its value sympathetically estimated. It is essential to find out who are the keen and promising men on the staff. The Heads of Departments, in conjunction with the Deans of Faculties, might systematically bring such information to the attention of the Academic Head of the University.

6. The administrative staff of a great modern University, the Librarian and his assistants, and the skilled technicians in various departments, are essential to smooth working, effective teaching and the supply of facilities to the students. Their salaries should be commensurate with the services they render.

TRANSFERENCE OF FIRST YEAR UNIVERSITY WORK TO THE SECONDARY SCHOOLS.

In many parts of this continent the State Universities have grown in numbers so rapidly that they are approaching the breaking point. The Provincial University of Ontario has shared in this astonishing growth. The aftermath of the war accentuated a situation which was already developing. The influx of delayed students since the war to some extent hastened the congestion, but it was inevitable in any event. Two sets of forces have contributed to this growth. The *external* forces are (*a*) the increase of population and wealth, (*b*) the appreciation of the value of special training, and (*c*) the growth and increasing efficiency of secondary schools. The *internal* forces are probably (*a*) the multiplication of courses and (*b*) the establishment of new departments. The most important of all these forces is the increase in the number of pupils in High Schools, and this increase seems likely to continue at a rate more rapid than the growth in the general population. In 1918 the number of candidates for matriculation in Ontario was 2,516; in 1919 the number had grown to 4,146 and in 1920, to 5,291. The compulsory attendance of adolescents will accelerate this increase in secondary school population.

How are the Universities to deal with these expanding numbers?

If the rate of increase in attendance at the Universities should grow so as to make the financial recommendations of this report inadequate, then either increased appropriations will be required or the functions of the different units in the educational system of the State must be re-defined. We recommend that before definite steps are taken further to increase staffs and erect new buildings to cope with this prospective situation, another solution be considered—viz: the transference of the work, in both Honour and Pass courses, now done in the First Year at the Universities, to such Secondary Schools as are, or shall be, able to do it.

1. Is it possible to do this in Ontario?

(*a*) The First Year Pass courses are similar in content in most departments to the Honour courses for Junior Matriculation. Full Honour courses in all departments are *now* provided in about fifty Secondary Schools. Without any change in organization, most of these schools could undertake to give instruction in all the pass subjects of the First Year of the University.

(*b*) The courses of study of the "Upper School" could be extended to include

Honour courses in *all* departments of the First Year in about twenty-five Collegiate Institutes of the Province.

(*c*) In all probability greater freedom will be given by the Department of Education to local communities in organizing High School courses to meet their particular needs. The local school authorities will be able to co-operate closely with the Universities and to establish such courses as may be desirable. The new elasticity of the Secondary School courses will probably make it possible to shorten the time of preparation now required for admission to the University.

(*d*) Local Boards of Education who established such advanced courses would probably require additional government grants for their maintenance.

(*e*) The prospective increase in the number of pupils attending Secondary Schools, wherever the Adolescent School Attendance Act is proclaimed, might delay, but would not necessarily prevent the establishment of these Honour courses.

2. What would be the probable result of making this transference in Ontario?

(*a*) *In relation to the Universities*:

(i) The usual University Arts course could be shortened to three years. Any student who wished to spend four years could devote his fourth year to graduate work, for example, for the degree of M.A. The medical course might be reduced to five years. Reductions could probably be made in other Faculties.

(ii) The Universities would be relieved of a great volume of work that could be equally well done in the Secondary Schools, and they could devote themselves to their proper sphere of more advanced studies. The Universities were established primarily to provide men and women with a liberal education and to train others for distinctive work in various professions. To realize these purposes, there has been at times a tendency to lower entrance requirements and take in poorly prepared students; virtually to enter the field of Secondary education, when High Schools were few in number or imperfectly equipped. Now that so many Secondary Schools are well staffed and equipped with laboratories, it would seem possible for the Universities to divest themselves of work which could be efficiently done elsewhere. This can be done by prolonging the Secondary School course so as to provide for full First Year work. The result would, in the long run, be the elimination from the overburdened University of most of its High School work. The University will have a better chance to be a University.

(iii) The University staff, would have more time for advanced work, for original investigation, and for closer personal contact with the individual student.

(iv) The undergraduates, male and female alike, would enter the University at a more mature age. The loss of University "atmosphere" for an initial year would be compensated by the additional receptivity and power which maturity brings.

(v) The character of the instruction provided in the Collegiate Institutes for First Year students would probably be as good as that now given to large classes in the Universities. The pupils would receive more individual attention when taught in smaller groups.

(*b*) *In relation to the Secondary Schools*:

(i) Secondary Education would be stimulated and elevated in the communities where these advanced courses are provided. The local Collegiate Institute would have more direct connection with the University; each would, in fact, be a local college for its community. The term "Collegiate" would regain its proper meaning.

(ii) With greater scope for the individuality of the teacher under a more elastic Secondary School curriculum, and with the opportunity of teaching more advanced classes, the teaching staff in the Secondary Schools would rise to the educational demands of the new situation.

(iii) The possibilities of beginning a University course would be opened up to a larger number of students in the centres where these courses are established. Students from adjoining localities would not be required to go so far from home to enter upon a University course.

(iv) On the other hand, direct connection between the University and the smaller High Schools and Continuation Schools of the Province would be broken. The student from the smaller High Schools would have to attend a larger school for a year before entering the University. It is argued that this additional transplanting would deter such students from going on to the University.

Your commissioners suggest that this subject receive the fullest consideration of the Department of Education and the various Universities of the Province.

UNIVERSITY EXTENSION.

The functions of a modern University have been extended beyond the teaching of undergraduates and the training of their powers. There has been an intensification of courses at the higher stage, in the form of post graduate work and research. There has been an extension of university teaching to bring the advantages of the University to those who cannot attend its regular sessions. The University is no longer self-centred nor does it cherish an ideal of selfish culture. It seeks to serve the people and bring its resources as close to them as possible.

This University extension movement is a valuable part of the effort to expand and extend the education of adults. There is no reason why systematic education should cease with adolescence. The need for adult education under present conditions is greater than ever. Important economic questions, both in politics, industry and commerce, are constantly presented to adult citizens, and can be properly answered only by clear thought and accurate knowledge. Women, newly dowered with the franchise, are keen to be instructed in the great principles of government and in political and economic issues. The foreign-born population must be Canadianized. Many workers, who now have more leisure, desire to use it not only for amusement but for instruction, and would fill it with such materials of thought that they may become more useful citizens in the State. The number of young people who are taking courses in night schools and in Correspondence Institutes indicates another field for educational extension among adults. The more the Universities go out to meet the people, the greater will be the appreciation of a University's work and the more heartily will they be financially supported.

This extension work is carried on by the following means: (*a*) Correspondence Courses and Summer Schools, primarily for teachers in the public schools; (*b*) Popular lectures in local centres; (*c*) Tutorial classes, or systematic instruction outside the University, in definite courses; (*d*) Short courses for Farmers' Clubs (as inaugurated in the University of Toronto); (*e*) The Workmen's Educational Association.

This last, popularly known in England by its initials, the W.E.A., is one of the most interesting and significant of present day movements. It was launched in England in 1907. In 1919 there were 239 branches and over 25,000 students. The middle-aged working man makes an ideal student. After the period of youthful restlessness the return to the study of finer and higher things of life is a splendid performance. Two features marked the movement in England, (1) The teaching was given by highly-trained University men of the best type. (2) The subjects of study were not technical, nor even predominantly economic, but literary and cultural. Classes which began with political and economic subjects, frequently added historical, literary, and philosophic.

Similar development has characterized the movement here. In 1918, the W.E.A. was organized by men and women who wished to increase their general knowledge. In the first winter, 100 attended; in the second winter, the same number; and in the third winter, 160. A group of 30 meets in Hamilton.

The members meet in the evening to study economics, political philosophy, civic administration, public finance, psychology and logic, English literature, and the history of the British Empire. The fee is purposely kept to the minimum amount.

For all these departments of extension carried on by the Universities, sufficient financial support is needed. Members of the staff will probably be detailed to give their whole time to this branch of University work.

University College.

The University Act of 1853, following the early charters of the University of London, constituted the University of Toronto as purely an examining and degree-conferring body, and University College as a teaching body. The maintenance of University College, with adequate State endowment and on a strictly non-sectarian basis, became thus an integral part of the educational policy of the Province. The Federation Act of 1887 introducted a new order of things. The University of Toronto became a teaching body as well as an examining body; and undertook to provide instruction in certain specified subjects for the undergraduates of Federated institutions. The State's effort in higher education in Arts was divided into two parts—one part was carried on in University College; the other in the University of Toronto. The subjects taught in University College, viz.: Latin, Greek, Ancient History, French, German, English, Oriental Languages and Moral Philosophy, were to be taught also in the Federated Colleges. All the other subjects of the curriculum—Mathematics, Physics, Astronomy, Geology, Mineralogy, Chemistry, Biology, Physiology, History, Ethnology, Comparative Philology, Italian, Spanish, History of Philosophy, Psychology. Logic, Metaphysics, Education, Political Science, including Political Economy, Jurisprudence and Constitutional Law, and Constitutional History—were to be taught by the University of Toronto and to be open to the students alike of University College and of the Federated Colleges. By the University Act of 1906, the unity of the State educational effort was fully maintained. A common purse was provided for the University of Toronto and University College. They were recognized as representing the Provincial system of higher education in the liberal arts and in the sciences. The one Board of Governors controlled the affairs of both. In maintaining the College system in the University, the prosperity of University College was necessarily a fundamental principle. If University College were weakened, the whole federal system would be weakened. In 1906 the identity of University College, as the State College in the complete system, was emphasized by the appointment of a separate Principal, Faculty and Registrar.

University College grew in numbers. It could not grow in range of instruction, because the subjects of instruction were limited by the Federation agreement. Naturally the greatest growth took place in the newly re-organized University, which gave instruction to students from all the colleges in a wide range of Arts subjects, and which presently included Faculties of Medicine, Applied Science and Forestry. The students of University College received their instruction mainly in the class-rooms of what had for years been called "University College," but which began to be known as "The Main Building" of the wider University of Toronto. The administrative officers of the University were housed here when the growing administrative work of the University called for more accommodation. This was secured at the expense of existing class-rooms. In the "Main Building" most of the non-laboratory subjects of the University Arts course are also accommodated.

The result of these developments has been that the identity of University College is in danger of being lost and its students are suffering from lack of proper teaching accommodation.

We believe that University College, the State Arts College in the Provincial University, should be maintained in dignity, efficiency and distinctness, and should have a definite local habitation. It is the oldest and most central part of the University. It houses "the humanities" and stands for the essentially liberal and cultural studies. We therefore recommend that:

(*a*) The present "Main Building" be called by its historic name, "University College" and be the home of that College.

(*b*) The University Administrative offices be removed to a new Administration Building. (i) The distinctively University Buildings—Convocation Hall, the Examination Halls and the Administrative offices— might thus stand together as one central group. (ii) The Administrative work of the University has been seriously hampered, if not impaired, by the lack of proper office facilities in the old building. (iii) Further accommodation would at once be provided for the students of University College—by far the largest body of Arts undergraduates.

(*c*) A new wing be erected, completing the quadrangle on the north side. This would provide greatly needed modern class-rooms, and private rooms for professors and instructors. This addition and the removal of the Administrative offices would make it possible to give adequate accommodation in this building, for years to come, to the non-laboratory University Arts subjects, such as Economics, History, Philosophy, Mathematics, Italian and Spanish. In due time residences for University College men and women could be erected in proximity to University College Building. Such residences would undoubtedly foster the spirit of College loyalty and tend to preserve College identity.

The Ontario College of Education.

When the building now occupied by the Ontario College of Education was erected only part of the original plan was carried out. Some of the structures on the property purchased were utilized temporarily for school purposes. Although quite unsuited to the work of the school they have never been replaced. First the war and afterwards uncertainty regarding the status of the Faculty of Education postponed building operations. The relation of the College to the Department of Education and to the University is now permanently settled and plans for adequate accommodation should be carried out. The following are urgently needed:

(1) Additional Class-rooms, (2) Household Science and Manual Training Rooms, (3) Art Rooms, (4) Assembly Hall, (5) A Gymnasium. The cost of the building will probably be about $300,000.

After a careful examination of the premises, we recommend that this work be proceeded with as soon as possible.

The budget of the College of Education is to be voted annually by the Legislature as part of the estimates of the Department of Education.

The new arrangements for teacher training in the Province will make it possible to develop graduate work in the College of Education and to provide such advanced instruction as is now sought by Canadian students in Chicago and Columbia Universities. For the highly-trained, broad-minded, experienced educational leader in this Province, the field is wide.

ROYAL ONTARIO MUSEUM.

The construction of this Museum was recommended by the University Commission of 1906. The services it has already rendered to the University of Toronto and the Province generally, more than justify its erection. One-half of the cost of maintenance is provided by the Government and one-half by the Provincial University. Its contents are of priceless value; some collections are absolutely unique. The greater part have been acquired through the generosity of individual donors.

(*a*) To the people at large the Museum is of value on the æsthetic side. (*b*) To the industries, its collections of robes, tapestry, furniture, pottery, etc., are of great practical use. Napoleon III, by his establishment of local museums throughout France, gave an enormous impetus to the development of artistic craftsmanship and to the consequent enrichment of his country. Museums will serve a similar practical purpose in this Province. (*c*) To the University, the Museum is essential for teaching purposes in various departments. (*d*) It is proposed to put collections of material at the disposal of Collegiate Institutes and other places of learning throughout the Province.

At the present time, the Museum is so overcrowded that valuable articles cannot be publicly exhibited. Its teaching power is limited by want of space. We believe it to be desirable that the new wing in extension of the south side of the Museum should be proceeded with in the future. The erection of this wing would accommodate the University Departments of Mineralogy and Geology, in close proximity to their great collections now in the Museum, and would release space in the Chemistry and Mining Building for the growing department of Chemical Engineering.

CAPITAL GRANTS FOR BUILDINGS.

1. The building programme of the Provincial University was largely laid down before the war. It is not something new or hastily devised. What was needed before the war is urgent to-day.

2. We feel that the Government may properly and helpfully give aid to the building programmes, as well as to the maintenance of Queen's and Western Universities.

3. We recommend that grants be given on Capital Account for the erection of buildings that are immediately necessary and on which construction should be begun as soon as practicable. The amount recommended will probably cover the building programme of the next few years.

4. Wherever possible, new buildings should be so planned as to meet immediate needs and to be capable of extension when further demands on their space arise.

5. After giving due consideration to the order of urgency in the building programme of the Provincial University, we recommend that the amount of $1,500,000 be granted forthwith for the erection of the following buildings:

Heating Plant	$275,000
Anatomy Building	400,000
Administration Building	200,000
North Wing of University College	300,000
Forestry and Botany Building	200,000
Women's Gymnasium, etc.	125,000
	$1,500,000

6. We recommend that the amount of $340,000 be granted to Queen's University forthwith for buildings and equipment urgently needed:

Extension of Mechanical Engineering and University's share of heating plant	$125,000
New Library Building	150,000
Repairs and extensions to existing buildings	50,000
Equipment for Applied Science	15,000
	$340,000

7. We recommend that the sum of $800,000 be granted to the Western University towards the erection of its new Arts and Science Buildings and Library. The Library can be in the meantime safely housed in part of the Arts Building. This grant will probably be all that the Province will be asked for on Building Account for many years.

8. The total amount required for immediate building necessities is $2,640,000. This might be borrowed on Provincial Capital Account, and provided as required over a two or three-year period.

FINANCIAL SUPPORT OF THE PROVINCIAL UNIVERSITY.

This question is vital to the maintenance and development of the Provincial University. A well-equipped University, which also carries on post-graduate work and by the excellence of its staff attracts students from the whole Dominion, will, through increasing attendance, staff, equipment, and departments, require an increasing revenue. The total expenditure in 1906-07 was $411,696. In 1919-20 this had risen to $1,509,311; in 1920-21, to $1,994,938. The total grants for maintenance from the Province to the University of Toronto have, in recent years, been as follows:

1910-11	$504,647.31
1911-12	488,887.00
1912-13	481,368.70
1913-14	419,833.60
1914-15	707,618.19
1915-16	567,914.49
1916-17	669,617.96
1917-18	749,962.62
1918-19	775,499.90
1919-20	952,000.00

These figures show that the Province has not been ungenerous to the University.

We agree with the University Commissioners of 1906 in believing that the University income should be fixed upon a reasonably definite basis, and that this basis should provide an amount which will automatically increase with the growing population and wealth of the Province. A certain percentage of the Succession Duties would provide such a basis. On this basis the income was fixed in 1906. We believe it still to be advisable.

The University Act of 1906 provided that for the maintenance of the Unisity and for University College there should be paid yearly to the Board of Governors a sum equal to fifty per cent. of the average yearly gross receipts of the Province from Succession Duties, the average to be determined by and based upon the gross receipts from such duties for the three years ended on the 31st day of December next preceding the day on which the first instalment of the year is to be paid. This provision was limited by an amendment in 1914 to a maximum of $500,000 in any year. The rapid growth of the institution and its needs was scarcely realized at that time. Such growth in University education is now a marked phenomenon throughout the English-speaking world. Had this limitation not been made, the University would have received in the last six years the additional sum of $1,310,839, and this would have met all its requirements both for maintenance and buildings.

The Provincial Revenue from Succession Duties during the past ten years has been as follows:

1910-11	$963,195.49
1911-12	773,712.39
1912-13	1,062,694.87
1913-14	1,196,818.36
1914-15	1,615,777.84
1915-16	2,333,700.03
1916-17	3,110,495.24
1917-18	3,108,826.88
1918-19	3,366,823.94
1919-20	4,014,000.00

We recommend that once more for the maintenance of the University and of University College there be paid yearly to the Board of Governors a sum equal to fifty per cent. of the average yearly gross receipts of the Province from Succession Duties, the average being calculated on the receipts of the three preceding years.

(*a*) This method is a return to a well-tried and satisfactory arrangement.

(*b*) It will provide a revenue large enough to meet present and prospective needs and to secure a balance from which ordinary building requirements in the future can be met.

In 1919 it would have given	$1,425,503.69
In 1920 it would have given	1,597,691.01
In 1921 it would have given	1,748,275.13

(*c*) The experience of the past fifteen years shows that this income would have kept pace with the needs of the University. If, however, in the future, the return from this source should exceed the needs of the University, this percentage should be readjusted to meet the changed situation.

(*d*) The assignment of this definite source of income to the Provincial University will prevent any criticism to the effect that in giving grants-in-aid to other Universities in the Province, the Legislature is diverting funds from the Provincial institution and is thereby crippling its efficiency or stifling its growth.

That the income proposed for the University is not excessive may be shown by a statement of the budgets of eight great Universities in the United States:

	1901	1910	1918	1920-21
Michigan	$500,000	$1,777,425	$2,552,800*	$3,819,000*
Wisconsin	400,000	1,755,000	2,598,287*	4,262,085*
Illinois	450,000	1,639,792	2,825,409*	3,532,785*
Minnesota	350,000	813,784	2,678,453*	5,059,591
California	500,000	1,625,000	3,486,625*	4,432,282*
Harvard	....	....	....	4,157,315*
Yale	....	....	(1918-19)	2,667,518
Pennsylvania	....	....	....	3,269,552*
Toronto	233,283 (1902)	777,800	1,191,602*	1,993,000*

The "Statistics of State Universities and State Colleges," issued by the American Board of Education for the year ended June 30th, 1918, gives the "total working income" of the State Universities as follows:

Michigan	$2,647,833.00
Wisconsin	2,748,287.00
Illinois	2,075,409.00
Minnesota	2,803,703.00
California	3,732,986.00

The details of the expenditure by the Board of Governors are laid before the House. Elsewhere in this Report, recommendation is made that fullest publicity be given to the work and plans of the University by the appearance of the President or a representative of the Board before the House, to report upon and explain the past year's operations and to set forth projected developments in the future.

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*Exclusive of Buildings.

AID TO QUEEN'S AND WESTERN UNIVERSITIES.

1. Since 1907 the Province has made annual maintenance grants to Queen's University, beginning with grants for the School of Mining and the Faculty of Education.

1907-08	$51,000
1908-09	66,500
1909-10	72,500
1910-11	74,000
1911-12	74,000
1912-13	76,000
1913-14	74,000
1914-15	69,000
1915-16	127,000
(Including for the first time grants to Arts and Medicine)	
1916-17	122,000
1917-18	137,000
1918-19	137,000
1919-20	177,000

The revenue for 1919-20 including the Government grant of $177,000, yet fell short of meeting the expenditure by $41,000.

We believe that a *definite* yearly grant, for a period of five years, should be made to this University. On this basis it will be possible for the University authorities to have an approximate knowledge of their financial resources and to arrange their expenditure accordingly. We recommend that there be paid, out of Consolidated Revenue, through the Educational Estimates, a grant for maintenance to Queen's University of $275,000 for the first two years, and $300,000 for the next three years.

2. To Western University at London, the Province has made annual maintenance grants as follows:

1910-11	$10,000
(for Public Health Department)	
1911-12	15,000
1912-13	15,000
1913-14	15,000
1914-15	20,000
1916-17	60,000
(Including grants to Arts and Medicine)	
1917-18	60,000
1918-19	65,000
1919-20	84,000

The new Medical Building will be occupied in the near future, and increased maintenance charges will follow the erection of the new Arts Buildings.

We recommend for maintenance a grant of $200,000 a year for the first two years, and a grant of $250,000 for the next three years.

3. In the case of the grants to Queen's and Western Universities, we recommend that at the end of five years these sums be readjusted for a further period of five years by a Court of Reference to be appointed by the Lieutenant-Governor in Council.

The Court, in making such readjustments, should take into account such considerations as the number of students, efficiency of past work, educational opportunities in the district, and the amount of local self-help. Both Queen's and Western have received a large amount of local support. This will doubtless be continued and extended. "To supplement and encourage local effort" is a sound principle of Government aid.

DIRECT EDUCATIONAL TAX.

1. Revenues for higher education are secured in various ways in different Provinces and States.

Alberta.—Legislative grants and 50% of receipts from Succession Duties.
British Columbia.—Annual Legislative grant.
Manitoba.—Annual Legislative grant.
Saskatchewan.—Tax of two cents per acre.
New Brunswick.—Annual Legislative grant.

In the United States, the usual method is to levy a mill tax on property for maintenance, and to vote buildings and needed additional maintenance by special appropriations. For example:

University of Minnesota:
(*a*) Mill tax, 23/100 of a mill, yielding $408,000.
(*b*) Appropriation of the present biennium $1,865,000.
(*c*) Special appropriations for agricultural extension $122,000.

University of Michigan:
(*a*) Mill tax of $\frac{3}{8}$ mill on each dollar of equalized value in the State, providing $1,687,500 for current expenses.
(*b*) Specific appropriations for buildings.

University of Illinois:
(*a*) Mill tax of $\frac{2}{3}$ mill on all property in the State, yielding in 1920, $2,530,136.
(*b*) Land Grant Act and other Federal Acts yielding $313,500.
(*c*) Special appropriations for buildings.

University of Wisconsin:
(*a*) $\frac{3}{8}$ mill tax for maintenance.
(*b*) Special appropriations for additional current expenses, buildings and permanent equipment.

2. The sums asked for education are large. Can they be provided in view of existing taxation and pressing demands for other purposes? While taxation is heavier than it was in former days, it must be remembered that:

(*a*) Expenditure on education is productive and constructive; it is really a capital investment which yields large returns.

(*b*) Countries much more heavily taxed than our own, notably the United Kingdom, are devoting largely increased sums to education, as the best means of solving social problems and effecting permanent improvement.

(*c*) The increase in the total sums collected in taxes is largely due to the decreased value of the dollar, and does not represent a corresponding increase in the proportion of the people's property and income.

(*d*) The revenues collected by the Provinces are very much less than the revenues collected by the Federal and Urban Municipal Governments:

1919.	Federal revenues per head	$35.42
1918.	Provincial revenues per head	8.04
1919.	Urban Municipalities of 10,000 and over (2,980,000 population in all per head) . .	45.47

(*e*) Of these Provincial revenues, a very large proportion comes, not from Provincial taxes, but from (1) Federal subsidies, and (2) Crown Land resources—revenue sources which are not, in any appreciable degree, available in the States to the south of us.

3. If the revenues of the Province are not sufficient to meet the expenditures of the Province, including the present and prospective needs of primary, secondary and higher education, we would recommend the levying of a direct tax of one mill on the dollar on the municipally-assessed value of the rateable property of the Province (excluding incomes, in order to secure greater equalization of assessment). It might be necessary to have a Provincial Board of Equalization. When Saskatchewan passed the Public Revenues and Wild Lands Tax Act, Provincial equalization became necessary. The 1914 Report of the Ontario Public Roads and Highways Commission gave some striking instances of variation in local assessment. The Ontario War Tax of one mill on the total assessment (including assessment for income) yielded over $2,000,000 a year. A small tax on rateable property would have much in its favour, in its certainty, stability, growth in returns and ease of collection.

This tax of one mill on the dollar should be earmarked for education in general—elementary, secondary and higher. A definite and increasing sum would be provided, not subject to reduction by other demands. This sum, so raised by direct tax, might well be devoted to (1) the extension of rural school education; (2) the aiding of urban centres in providing part-time instruction, under the provisions of the Adolescent School Attendance Act; and (3) the extension of facilities for higher education through Collegiate Institutes and Universities. The normal taxpayer's dislike of taxes would apply with less force to a Provincial tax for education than to a tax for any other object. The desirability of adequate and wise support of education is almost universally admitted.

All of which is respectfully submitted,

(Sgd.) H. J. Cody, *Chairman*
J. S. Willison
J. Alex. Wallace
T. A. Russell
A. P. Deroche
C. R. Somerville.

Feb. 10th, 1921.

REPORT

OF

ROYAL COMMISSION

ON

UNIVERSITY FINANCES

APPENDICES

PRINTED BY ORDER OF
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UNIVERSITY OF TORONTO,

December 6, 1920.

TO THE HONOURABLE AND REVEREND H. J. CODY, D.D., LL.D., CHAIRMAN OF THE UNIVERSITY COMMISSION,

DEAR DR. CODY:

By the authority of the Governors and Senate of the University of Toronto I am submitting to you herewith a Statement with Reports setting forth the case of the University of Toronto for enlarged support by the Province of Ontario.

I have the honour to be,

Your obedient servant,

ROBT. A. FALCONER,
President.

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APPENDIX I

UNIVERSITY OF TORONTO

GENERAL STATEMENT

The Provincial University.—The fortunes of the University have been very intimately associated with the life of the Province of Ontario from its earliest days. The first Governor, John Graves Simcoe, inaugurated the proposal that a college or university should be erected, and his recommendation was supported by the Legislative Council and House of Assembly with a magnificent grant of land for which sanction was given by the Crown in 1798, but his real purpose was not to be realized in his own time nor indeed except through years of wearisome and precarious struggle. At last, however, the Provincial University became firmly established in Toronto, and it must always remain the peculiar creation and property of the people of this Province, who are bound to provide for their youth such education as will continue to be worthy of their progress in intelligence and wealth.

Federation.—The character and destiny of the University have been further established by the undertaking to maintain the State University in efficiency given to Victoria and Trinity Universities at the time of their federation with the University of Toronto. This unique organization has created for this University a distinctive character. Federation came gradually, and its results have been gradually stabilised. It brought unification of collegiate and professional interests, and has not only prevented costly duplication, but also a variety of standards in higher education. To-day the degrees of the University of Toronto are recognized as comparing favourably with the best on this continent, and three colleges, besides the State college, in federation co-operate for the maintenance and development of one high standard in the Faculty of Arts. Communications are submitted from the federated Colleges.

Unification of the University.—Before Federation the diversity of interests in higher education was such that this Province was unable to provide for itself a University towards which the Legislature was either able or willing to grant such support as for many years previously had been given to State Universities in the United States. These great institutions had a start over the University of Toronto in their development. With the success of Federation, however, and with the carrying out of the constitution provided by the University Act of 1906 the University of Toronto entered upon a new and most successful period of its development. Arts became unified and strengthened by the addition of St. Michael's College in 1910. Some years earlier the rival Schools of Medicine in Toronto had been brought together into one great Faculty. In 1906 the School of Practical Science was transferred from its former direct relationship to the Government and became the Faculty of Applied Science, and in the same year the Faculty of Education was created to train the teachers of the Province of the higher grades. The University to-day, therefore, has grown into a vast, varied and complex organization.

Attendance of Students.—From the year 1897 to 1906 the attendance in the University and the School of Practical Science increased from 1,350 to 2,500, a little less than 1,200 in nine years, but in the first year under the new constitution numbers rose rapidly by 500 annually until 1909-10, when they reached 4,000. Standards were raised and courses were lengthened, with the result that there was very little change in the numbers until the first year of the war, 1914-15, when they stood at 4,400. During the war they declined rapidly. In the session 1919-20, however, the first full session after the war, they rose very unexpectedly to over 5,200. This year, at present, there are about 4,600 in attendance. But this reduction is more apparent than real, except in the case of the attendance at the Ontario College of Education, which is reduced by the removal of over 300 candidates for first class certificates from that College to the Normal Schools. The decline otherwise is due to the transfer to the College of Dental Surgeons of the teaching of Anatomy formerly given to students in Dentistry, owing to the impossibility of providing for them in our present anatomical quarters, and to the discontinuance of the matriculation class for returned soldiers. In Arts, however, the attendance this year is greater than last year, and is really larger than it has ever been. In Medicine the numbers of full-time students is slightly above that of last year. In Applied Science the attendance is practically the same. The congestion at present is, of course, partly due to the presence of the returned soldier, though chiefly so in the Faculty of Medicine. Though there may be fluctuations, it would appear that in Arts and in Applied Science the numbers will not likely be permanently reduced in the future, but under the necessary limitation which has to be made in Medicine they will probably fall in a few years to perhaps 700 in that faculty. Other departments, however, are likely to increase, especially Graduate Work, the New School of Commerce and Extension.

If the standards of entrance are raised in the Faculty of Arts, as has recently been done in the Faculties of Applied Science and Medicine, the students in the three largest Faculties of the University, as well as in the College of Education, will be of distinctly university grade, and no reduplication of instruction, such as may be given in the Collegiate Institutes of the Province, will be carried on in the University.

Origin of Students.—Tables are herewith submitted to show the origin of the students both as regards their homes and the occupations of their fathers. Attention is drawn to the wide representation of all parts of the Province in this distribution of students, and to the fact that the homes from which they come represent in a remarkable way almost every variety of occupation in the Province. They show how thoroughly democratic is the character of the student body.

Building Activity.—The record of attendance provides the explanation of the great activity in building which continued for seven years after the present Board of Governors took office. New laboratories had to be constructed, the Library extended, and buildings erected to accommodate teaching departments, old and new. The Governors drew up a carefully considered plan of building, including developments for administration, for it was evident that the conduct of the affairs of a great University like Toronto could not be carried on under the conditions that might have been sufficient when the various interests of the University were more or less independent. Unfortunately, however, though the Governors had reason to hope that their programme would be carried out, a stop was put to construction by the limited funds placed by the Government at their disposal, and even before the war this kept the University in a position of great congestion, hindered development in research and seriously interfered with its work otherwise. At the outbreak of the war the former activities of the University were directed into new channels. The attendance dropped rapidly, building ceased.

Present Conditions.—But again, in the first year of peace, an unprecedented attendance caused the University to face the old problems in a more acute form; the former number of students would have overcrowded the old accommodations, but one thousand more were in attendance. This is the situation in which we find ourselves to-day, except that one new building, now nearing completion, has been added for the Departments of Applied Mechanics and Electrical Engineering. Many of the departments of the University will be seriously crippled unless immediate action is taken in carrying out the building programme, which is submitted in the Appendix to this Statement. Special statements are handed in by the heads of the Departments of Anatomy, Botany and Political Science, but the requirements of University College and for women students are scarcely less urgent. The Principal of University College has submitted a memorandum setting forth the building requirements of the College. Undoubtedly it has been suffering from lack of proper teaching accommodation and of residences, and as the oldest and most central part of the University its needs should receive immediate attention. It is most unfortunate that the revenues at the disposal of the Governors were insufficient to complete these necessary building operations before the war, during the period when construction was less than half its present cost.

Results of Too Small a Staff.—The large attendance of students created another problem. The staff of the University had never been large enough. As early as 1891, in the Blake Report, attention was drawn to this fact, but the difficulties grew as the numbers grew. Men who had capacity for doing graduate and research work were compelled to undertake so much undergraduate instruction that both time and energy were exhausted, and young men joining the staff were overloaded with routine work in class-rooms and laboratories, and were thus deprived of the opportunity which they should have had of laying a foundation for productive scholarship or scientific research. The numbers of students in several departments are so large that some lectures have to be delivered twice, three, or even four times, by one teacher, a routine which becomes deadening.

But the staff was enlarged from year to year as is shown by figures herewith submitted. In 1904-5 it stood at 210 (exclusive of federated universities), whereas in the present session it has risen to 511 with certain appointments still to be made. An increase in our present staff, however, is necessary even should the number of undergraduate students be reduced. Only thus will it be possible for the University to enter upon an enlarged programme of graduate and research work.

Faculty of Arts.—It must not be supposed, however, that either in University College or in the Faculty of Arts of the University we have yet reached our limit even as regards undergraduate work. Changes will be made in the curricula to meet the changing conditions of the time, and new departments and sub-departments must be added. It is to be expected, for example, that the departments of Political Science and History, including Canadian History, will grow rapidly, and that with the general rise in the education of the Province greater attention will be given to the study of language and literature. In fact, unless they are not only maintained, but developed, the whole University will suffer. A wider diffusion of education on its humanistic side is required for our people, who now find themselves in the forefront among the most highly developed nations of the world. Also, if we are to judge by the experience of other Universities, both in Britain and in the United States, the new Department of Commerce will soon assume a large importance, and it will be necessary not only to provide accommodation, but to make new appointments of men who are competent to deal with the practical aspects of business administration and trade.

Graduate Work and Research.—But the direction in which the University must make the most distinctive progress is in graduate work and research. One chief function of a University is to extend knowledge and to train others who will extend knowledge; to be the home of productive scholarship and scientific investigation and to be the source from which there will go forth a stream of highly trained young Canadians competent to carry through this land the most advanced ideals and methods both in science and in scholarship. Graduate work will be of great advantage to the nation and will react beneficially upon the Province even in a material way. No Ontario youth should be under the necessity of leaving his own province in order to secure the most advanced instruction and the best guidance in graduate work and research which are to be afforded on this continent. Ontario must maintain the lead, and we have enough experience to prove to us that if we offer opportunities, not only shall we retain our own students who may be unable to go abroad, but we shall draw a very large number of graduates of other Canadian Universities, and thereby create a community of sentiment which will be of incalculable influence in unifying this Dominion in the future.

Research work is very expensive; it is impossible to prove its value by immediate results, but it is nevertheless essential. Good results cannot be obtained unless an investigator has uninterrupted periods of time for his work. Already, as is shown in the memorandum submitted, the University of Toronto has done much research, and a new impetus has been given to it by a special appropriation of $15,000 in the first year after the war, and $75,000 during each of the last two years. This is in addition to the research done under the special endowment of $100,000 created in connection with the Antitoxin Laboratories and an annual grant of $3,750 made to these laboratories for the same purpose by the Provincial Government. Attention is drawn to a careful Memorandum on Graduate Work and Research.

If graduate work is to be developed a system of scholarships must be established, not only to enable our students who have the inclination to undertake graduate work, but also to draw others from the Dominion at large. The Blake Scholarships awarded at Matriculation have been an inestimable boon to this University and to the Province. They have drawn into university life many of the finest minds who might otherwise have been diverted from an academic career. What these scholarships do for undergraduate work in the university should be done for graduate work either by a new foundation established from private sources, or, until this is provided, out of the regular University finances.

The Library.—The function of the Library in the life of the University can hardly be overemphasized. At present it contains about 160,000 bound volumes and 52,000 pamphlets, and in many departments is well provided. Ordinary undergraduate work in most departments may be maintained with moderate annual appropriations, but for graduate work there must be large outlay. In comparison with other universities the annual appropriation for the Library is very much too small. Also when additions are made to the Library building special provision should be made for graduate students. A Memorandum on the Library is appended.

Faculty of Medicine.—In recent years the Faculty of Medicine has made great advances. The erection of the Toronto General Hospital, of the University Pathological Laboratory in close proximity to it, and the equipment of the Departments of Biochemistry and Physiology, have placed this Faculty in an enviable position. Last year the gift made by Sir John and Lady Eaton of $500,000 for the development of Medicine and Pediatrics made possible for the first time in Canada the appointment of a full-time professor in Medicine, and already the good results are becoming manifest.

Word has just been received that the Rockefeller Foundation will appropriate $1,000,000 to the University of Toronto for the general endowment of the Medical Department upon condition that the University carry out a programme of development, including items to be provided from funds other than those contributed by the Rockefeller Foundation. Three of these items are the erection of a new Institute of Anatomy (approximately $600,000); an addition to the Pathological Building for Clinical Laboratories (approximately $300,000); and an annual increase for salaries on the scale set forth in the last estimates of the Board of Governors.

As will be observed in the appended memoranda of the Dean and the Associate Dean of Medicine this Faculty aims at turning out general practitioners who will be not only acquainted with the approved methods of practice, but who are able to keep abreast of new discoveries; large laboratories well equipped are necessary if the student is to get the habit of independent observation and understand the functions of organs and tissues; while in the hospitals there must be adequate provision made for the diagnosis and treatment of diseases. Toronto is equipped very badly with laboratories in Anatomy and Pharmacology, moderately in Hygiene, not at all in the Clinical Departments.

In addition to this the supply of teachers is quite insufficient. There should be enough instructors to allow time for original investigation. Unless the University leads in original thought medical science will retrograde, and special research institutes can never exonerate a university from this duty. One great advantage possessed by this University is the close connection that exists between it and the Public Health Laboratories.

The reorganization of clinical teaching must be continued, especially in the departments of Surgery, Obstetrics and Gynaecology; Pathology also must be much enlarged; Psychiatry needs great expansion, and Hygiene is only at its beginning. Though the income from the magnificent gifts made by Sir John and Lady Eaton and the Rockefeller Foundation will go a long way towards this reorganization, it must not be supposed that it will be nearly sufficient for the development that is necessary to place this Faculty abreast of the best on the Continent.

Antitoxin Laboratories.—Connected with the Department of Hygiene are the Connaught Antitoxin Laboratories, which were established to provide facilities for research in Preventive Medicine, Public Health and Hygiene and for the manufacture of diphtheria, tetanus and anti-meningitis sera, Pasteur treatment, smallpox vaccine, and sera and antitoxins for other diseases. Through these laboratories it has been possible for the Government of the Province to distribute sera and antitoxins free, and the Canadian Army was supplied during the war. The research in Preventive Medicine conducted in these laboratories has already been referred to. A statement regarding the work of the laboratories is appended.

A table is submitted making a comparison of Toronto with other leading medical schools of this continent in regard to the number of students in attendance and the expenditure per student.

The direct results of science in ameliorating the conditions of human life are strikingly manifest in medicine. In the laboratory the sources of diseases have been discovered, and their remedies provided, and the combination of laboratory methods with scientific clinical observation has resulted in the last two generations in adding ten years to the average human life in civilized countries. Expensive as is the equipment and maintenance of a first-class faculty of medicine, if it demands high standards of education and promotes research, it soon makes not only a province, but mankind, its debtor.

Faculty of Applied Science.—The Faculty of Applied Science has been organized into many departments to meet the developing requirements of the Province, and to keep pace with the rapid expansion of engineering and of the applications of Science to industry. During the past two years the attendance has been the largest in the history of the faculty, and the indications are that the present numbers will be maintained or increased. It is, therefore, certain that a much greater expenditure may be anticipated. Indeed, this faculty will always be one of the most expensive in the University. It must of necessity be so, for the cost of the apparatus and machinery required for instruction and research is very great, and they become antiquated so soon that constant renewals must be made. The development of the natural resources and the industries of the country has been and will be dependent upon the technical education that is given in the Faculty of Applied Science. The prosperity of the Province demands that this Faculty be maintained in a state of high efficiency. Efficiency in any one department depends upon a thorough co-ordination of several related departments, as *e.g.*, Mining Engineering is interlocked with Chemical, Electrical, Mechanical and Metallurgical Engineering. Of recent years Mining and Metallurgy have been greatly extended in this University to meet the needs of the Province. Within a few years the centre of the mining industry of Canada has been transferred from Montreal to Toronto. From this city the railways lead north into that section of the Province of Ontario which, in the richness of its minerals, has already far exceeded the dreams of its most sanguine promoters and which as yet is really known in but a few localities. The University must provide not only the scientific explorers, but the mining engineers to develop the wealth that lies hidden in that north country to which Toronto gives access. The careful and suggestive report which the Dean has prepared sets forth the present condition of the Faculty, its immediate requirements, with some indication of their cost, the aim of the Faculty in relation to the expansion of the country, and the connection of industrial development with its progress.

Faculty of Forestry.—Though the Faculty of Forestry has not grown as have others within the University, it has played an important part in the material development not only of the Province but of the Dominion, and there has always been a large demand for its graduates. The permanent productivity which will result from scientific care of the forests makes the work of this Faculty of high importance, and it is seldom realized that a much larger income has accrued to the Provincial Treasury from the forests than from the mines. At first sight it might appear that there is duplication in the work done in the Faculty of Forestry and in the Agricultural College at Guelph. But this is not the case. At Guelph forestry is studied only in so far as concerns the farm wood-lot. In the University the aim is to produce foresters whose life-work will be to conserve and develop the forest resources of the Province and Dominion. This training requires the best of the basic sciences as they are taught in the University, and the practical experience which is to be acquired from the observation and study of phases of the manufacture of lumber which have their headquarters in a large city like Toronto. The Dean of this Faculty outlines in a Report appended four directions in which development should take place:

1. Establishment of a practice camp and forest experimental station.
2. A post-graduate course leading to the degree of Master of Forestry.
3. A forest-ranger's course.
4. A forest-products museum.

It is also assumed that any development of this course is conditional upon the erection of a new building in which Botany also will be housed.

University Extension.—Unlimited opportunities are opening out for university extension. In the report submitted a summary is given of the main divisions under which this work is now being conducted.

1. Teachers' classes together with Summer Sessions for the purpose of enabling teachers to secure a degree in Arts. This department is now serving two hundred teachers with room for expansion for many times that number.

2. Local lectures are given in various parts of the Province. The development of these lectures depends only upon the size of the teaching staff of the University, and the time at its disposal for doing outside work.

3. Tutorial classes are conducted both in Toronto and in the Province. The extension of this work also is bound up with the growth of the teaching staff.

4. Special attention is drawn to the work which has been inaugurated under a branch of the Workers' Educational Association. The purpose and character of this work, which is very important for a Province which is growing so rapidly in its industrial centres, is well set forth in the attached memorandum.

5. A short course intended primarily for members of Farmers' Clubs. This course begins during the present session, but will probably be much developed in the future.

Social Service; Course for Graduate Nurses.—A memorandum is submitted outlining the work of this comparatively new department. Also this winter a course has been established to provide special training for graduate nurses who will undertake duties in connection with the Red Cross Society for the improvement of national health. The expense is borne by the Society.

Ontario College of Education.—By reason of the changes that have been introduced in the organization of what was the Faculty of Education it is now possible for the Ontario College of Education to modify to some extent the character of its work. Hereafter those who enter this college will be required to be graduates in Arts (with the exception of some in special courses), and reduced numbers, together with the better quality of the student, will make possible a more thorough training of the teachers in the higher positions. Also, graduate work will be developed, and it is hoped that a centre will be created within the University such as hitherto has only been found in some of the larger universities of the United States. The additional needs of this college are summarized in the Report submitted by the Dean. They are, briefly: A new building for Gymnasium, Assembly Hall and Library, and more class-room accommodation. Also some additional instructors and graduate scholarships. Before long a residence should be provided for the students of this college.

Future Developments.—The University finances being what they are, it is very difficult at present to consider seriously the addition of responsibilities in the way of development of new departments or faculties, but unquestionably the progress of the community will demand from time to time that attempts shall be made to meet the more urgent requirements.

Salaries.—The welfare and progress of the University are vitally dependent upon the scale of salaries which the resources at the disposal of the Governors allow them to adopt, because unless they are kept at the prevailing level of the universities of a similar grade the staff will, over a period of years, deteriorate. The number of highly productive scholars and scientists who create the atmosphere of an institution inspire students and call out their best powers is comparatively small, and the best men receive attractive offers from other universities, as well as from industrial and business concerns. Also, unless young men have fair prospects for a comfortable livelihood there will be a diminishing supply of our ablest and best for academic work. It would be delusive for the University to rely solely on idealism. Its quality will not survive long under hard conditions which the people of the country have it in their power to remedy. Moreover, as has been well said by Dr. Howell, of Johns Hopkins University, idealism is not always accompanied by high intellectual gifts, and alone it will not prove sufficient to solve the scientific problems upon the determination of which so much of the improvement of our human lot is contingent. Reasonable salaries must also be given to skilled technicians, librarians and the general administrative staff, without whose faithful service the best results of the teaching staff cannot be obtained.

Estimated Expenditure.—As a result of the survey of the present position and the immediate needs of the University the following estimate may be made, including capital and the increased annual expenditure which may be anticipated as being necessary before the close of another decade.

I. Amount required on capital account for the erection of buildings, most of which should be proceeded with at once (see memorandum):

(1) For the University itself $4,150,000

It is not necessary that the payment of this amount should be made within a few years by provincial grants; it may be met over a long period by a process of amortization. To extinguish the debt in forty years, $3.73849 paid semi-annually for forty years is the equivalent of $100 now, money being worth 7 per cent. per annum.

(2) For the College of Education 300,000

II. Increase in expenditure for Maintenance of the University.

Annual expenditures for emergent needs will rise rapidly unless the life of the University is to be injured. While it is hazardous to conjecture, it may be anticipated that with very moderate additions to the attendance expenditures will grow during the next ten years, until at the end of that period the annual increase over the estimates of the present year will reach at least $1,000,000, or in all a total annual outlay for general maintenance amounting to at least $3,000,000.

The facts upon which this estimate is made are:

(*a*) Maintenance of new Buildings ($4,000,000) and administration, at 7½ per cent.	$300,000
General increase in Administration and other departments	100,000
Additional for Research	125,000
" " Arts	100,000
" " Medicine	125,000
" " Applied Science	150,000
" " Forestry	13,000
" " Library	75,000
" " Extension	50,000

(*b*) The proposal to aim at an addition to the annual budget of the University of $1,000,000 in the next ten years, in addition to over $4,000,000 required very soon for buildings, will not appear unreasonable when it is borne in mind that in 1905-6, when the Governors took office, the expenditure was $456,398; in 1910 it was $775,000; in 1915-16 it was $949,630, and in the present year it is estimated at nearly $2,000,000. The increase from the year of the outbreak of the war to the present is more apparent than real when the depreciation of the value of the dollar is taken into account. In the ten years following 1905-6 there was an increase of about $500,000. Should the development of the University during the next ten years continue proportionately with what it was in the ten years preceding the war, and should the value of the dollar remain as it is at present, the addition of a million dollars would be no actual increase in the scale of expenditure over that of the first ten years under the present Board of Governors.

(c) Moreover, this expectation is supported by the accompanying figures from American Universities. Every one of the five great State Universities, together with Harvard and Pennsylvania, has at present a much larger budget than the sum proposed for Toronto within ten years.

	1901	1910	1918	1920-21
Michigan	$500,000	1,177,425	2,552,800*	3,819,000*
Wisconsin	400,000	1,755,000	2,598,287*	4,462,085*
Illinois	450,000	1,639,792	2,825,409*	3,352,785*
Minnesota	350,000	813,784	2,678,453*	5,059,591
California	500,000	1,625,000	3,486,625*	4,432,282*
Harvard	......	....	....	4,157,315*
Yale	......	....	....	2,667,518 (1918-19)
Pennsylvania	......	....	....	3,269,552*
Toronto	233,283 (1902)	777,800	1,191,602*	1,993,000* (estimate)

Nor can the difference in expenditure between those Universities and Toronto be explained by the large numbers of students in attendance there, because the expensive Faculties are Arts, Medicine and Applied Science, and very few American Universities have an attendance in these faculties much in excess of that of Toronto. The real explanation is that Toronto has been conducted on a scale of expenditure which has been too small to permit of the development which has already been attained by the leading Universities of the United States. There can be no question, indeed, as to the present status of our undergraduate degrees in Arts and in the professional schools. They hold their own with any on the continent, but this will not continue long unless advancement is made now, and in the matter of graduate work and research Toronto has a long way to make up on its neighbours. It may not be out of place to quote a sentence written some years ago by Dr. Pritchett, of the Carnegie Foundation for the Advancement of Teaching: "No such movement of the youth toward the institutions of learning has been seen since the great migrations of students to the universities of the Middle Ages. The university is becoming each decade a more powerful factor in civilization. The enormous increase in student attendance is throwing upon the strongest and most conscientiously conducted colleges and universities a burden and a responsibility that will tax their resources and their educational wisdom to the utmost. The country has grown accustomed to think in millions in the organization and conduct of business; it still thinks in thousands in the organization and conduct of universities, and yet the problem of the university in America has enlarged even more rapidly than the problem of business. The country is calling upon the university for an unprecedented service to civilization. How shall we find the money and the teachers to answer the demand?"

The success of the University makes possible the intellectual, spiritual, social and economic progress of the Province. From it come the teachers of the highest grades, clergymen, leaders in public life, lawyers, journalists, medical men who promote the health of the whole community, engineers and foresters who develop our natural resources, investigators who through their researches discover processes that lead to industrial and agricultural wealth. Not only so; the development of the University will inevitably improve education from the top to the lowest grade of school. A Province cannot possess a first-class university without soon finding keen intellectual vigour coursing through its whole system. It is this fact that has made the people of the American States so enthusiastic in the support of their State universities, for they know by experience that the general welfare of the public who do not come near them is affected by their efficiency. Our people are not less eager for education than the Americans, as is proved by our schools and by the large proportion of our youth who enter upon a university career, and they are sufficiently intelligent to be willing to make sacrifices equal to those of our neighbours for the support of a great provincial university in which their sons and daughters can find the best instructors, and so will not be driven by their desire for knowledge to emigrate to a foreign country.

The University of Toronto, as the range and quality of its work become more generally known to the people of the Province, is bound to appeal to their imagination. It stands among the best of the continent. Its progress must not be impeded. In war its students, graduates and staff accomplished magnificent things; in peace they will prove themselves equally forward in the promotion of the intelligence and high endeavour that constitute the greatness of a people, and in diffusing such conceptions of truth and conduct as will make us worthy to be a leading nation in western civilization.

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*Exclusive of buildings.

OCCUPATIONS OF THE FATHERS OF STUDENTS APPLYING FOR ADMISSION TO THE UNIVERSITY IN THE SESSION 1919-1920.

	Arts.	Medicine.	Applied Science.	Forestry.	Total.
Dentistry	6	1	2	1	10
Engineering	9	6	21	..	36
Finance	62	30	30	2	124
Journalism	12	3	2	..	17
Law	29	7	3	1	40
Medicine	27	41	11	2	81
Pharmacy	8	7	2	..	17
Teaching	27	14	18	3	62
The Clergy	61	27	26	2	116
Library	2	..	..	..	2
Veterinary	1	3	..	..	4
Art	2	2	1	..	5
Merchants: Wholesale	56	21	27	2	106
" Retail	104	61	50	3	218
Manufacturers	59	19	28	..	106
Artisans	60	36	47	1	144
Railway Employees	32	10	13	1	56
Dominion Officials	16	16	8	1	41
Provincial Officials	3	2	9	..	14
Municipal Officials	10	3	7	1	21
Farmers	172	99	79	1	351
Lumbermen	2	5	6	..	13
Soldiers	4	1	2	1	8
Fishermen	1	..	..	..	1
Not specified	120	54	59	7	240
	885	468	451	29	1,833

The students from the Province of Ontario are distributed as follows:

County	Faculty of Arts	Graduate Studies	Faculty of Medicine	Faculty of Applied Science	Faculty of Education	Faculty of Forestry	Faculty of Music	Department of Social Service	Returned Soldiers' Matric. Class	Totals
Algoma	13	......	4	3	......	......	......	2	2	24
Brant	39	......	19	19	8	......	......	2	3	90
Bruce	28	2	23	15	12	......	......	9	7	96
Carleton	57	3	20	11	6	3	......	3	5	108
Dufferin	7	......	9	3	2	......	......	3	2	26
Dundas	12	1	3	2	4	1	......	1	....	24
Durham	8	1	11	5	8	......	......	6	2	41
Elgin	17	1	16	9	6	......	1	6	....	56
Essex	32	......	21	7	6	......	......	1	1	68
Frontenac	3	......	8	......	1	......	1	1	....	14
Glengarry	3	1	4	......	......	......	......	1	....	9
Grenville	5	1	3	3	2	......	......	....	....	14
Grey	30	3	29	17	9	......	......	4	1	93
Haldimand	16	1	13	8	8	......	......	2	1	49
Halton	20	3	10	9	4	......	1	6	4	57
Hastings	19	1	17	6	1	......	......	1	....	45
Huron	51	4	20	17	28	1	......	2	2	125
Kenora	2	......	5	1	......	......	......	....	....	8
Kent	21	......	23	7	6	......	1	....	....	58
Lambton	21	......	24	11	5	1	......	5	....	67
Lanark	15	2	10	6	7	2	......	4	....	46
Leeds	21	1	15	3	4	1	......	3	....	48
Lennox and Addington	11	1	7	1	1	......	......	1	....	22
Lincoln	20	3	19	8	7	......	......	6	1	64
Manitoulin	1	......	4	......	......	......	......	....	....	5
Middlesex	44	6	13	24	24	......	......	8	2	121
Muskoka	3	......	3	5	......	1	......	2	....	14
Nipissing	8	......	4	5	2	......	......	1	3	23
Norfolk	10	2	6	9	3	......	......	4	2	36
Northumberland	20	......	9	2	4	......	......	3	1	39
Ontario	41	5	22	25	7	......	......	8	4	112
Oxford	27	2	28	11	8	......	......	3	....	79
Parry Sound	3	......	6	2	......	......	......	1	....	12
Peel	31	1	17	12	5	2	......	4	....	72
Perth	51	......	37	20	20	1	1	3	2	135
Peterborough	34	1	10	5	4	......	......	10	2	66
Prescott	1	......	......	1	2	......	......	....	....	4
Prince Edward	4	......	4	2	4	......	......	....	....	14
Renfrew	17	......	4	2	1	1	......	1	1	27
Russell	1	......	3	......	2	......	......	....	....	6
Simcoe	68	4	48	27	20	......	1	9	12	189
Stormont	6	......	3	1	3	......	......	....	....	13
Sudbury	3	......	4	2	......	1	......	....	....	10
Thunder Bay	6	......	3	2	1	......	......	1	2	15
Temiskaming	4	......	2	3	......	......	......	....	2	11
Victoria	15	3	15	12	10	......	......	1	....	56
Waterloo	22	1	16	28	8	......	......	6	....	81
Welland	21	1	25	13	2	......	......	2	....	64
Wellington	53	7	46	9	17	1	......	8	1	142
Wentworth	77	3	15	33	26	1	1	10	3	169
York	62	1	36	45	12	2	......	14	10	182
Toronto	693	80	412	299	84	18	11	151	80	1,828
Totals	1,797	146	1,128	770	404	37	18	319	158	4,777

BUILDING REQUIREMENTS.

I

1. Heating Plant	$300,000	
2. Anatomical Building	600,000	
3. Forestry and Botany Building	300,000	
4. University College Extension	300,000	
5. Administration Building (probably including completion of Convocation Hall)	400,000	
6. Women's Building (Gymnasium, etc.)	250,000	
		$2,150,000

II

7. Union and Residence for University College Women	$450,000	
8. Residence for University College Men	450,000	
9. Part of South Wing, Museum (to relieve Applied Science by removing Mineralogy and Geology)	250,000	
10. Medical Building at Hospital	300,000	
11. New Wing, Chemical Building	250,000	
12. Addition to Library	300,000	
		2,000,000
		$4,150,000

III

Extensions for College of Education	$300,000

1. *Heating Plant.*—The Heating Plant must be extended as soon as any additions are made to the buildings of the University. The present plant is now bearing a load almost heavier than should be put upon it.

A new plant should be erected probably north of Hoskin Avenue in order to serve the buildings on that part of the University grounds together with Victoria College, the Royal Ontario Museum and Trinity College. This would relieve the present plan sufficiently to enable it to carry the load when new buildings are erected south of Hoskin Avenue.

2. *Anatomy Building.*—Under the former Government authorization was given to proceed with the erection of a building for Anatomy. As far back as 1908 the need for such a building was presented to the Board of Governors. The condition of the Anatomy Department is being seriously jeopardized by any delay.

3. *Forestry and Botany Building.*—These departments are at present housed in an old residence to which temporary additions have been made under pressure of accommodation for students from time to time. Instruction is given in sixteen courses in Forestry and twenty-six courses in Botany, exclusive of graduate work. In 1919-20 forty-eight were registered in Forestry; and 645 were taking lectures and 303 taking laboratory work in Botany, from the Faculties of Arts (including Household Science), Applied Science, Forestry and Veterinary Science. In addition there were seventeen graduate students from nine Canadian Universities and Colleges. The condition of affairs is so serious that a special memorandum is submitted dealing with the needs of the Forestry and Botany Departments.

4. *University College Extension.*—The extension of the Main Building, by completing the quadrangle on the North side, would give University College immediate relief in the way of very greatly needed modern class-rooms and private rooms for the professors and instructors. If the Administration also were removed from the Main Building it might be possible to accommodate probably for the next ten years the non-laboratory university subjects, such as Economics, History, Philosophy, Mathematics, and Italian and Spanish. A special memorandum is submitted from the Department of Political Science setting forth the utter inadequacy of the present quarters in what was a private residence, 71 St. George St.

5. *Administration Building.*—The administration of this University is now so hampered by lack of adequate accommodation that the welfare of the University itself is beginning to suffer. Necessary developments cannot be undertaken unless more room is provided for various offices. The registration of students cannot be carried out, the effectiveness of the Registrar's and other offices is interfered with, and the Extension Department will be handicapped unless a new building is soon provided. It is suggested that this building might be erected at the West of Convocation Hall, the completion of the Hall being at the same time carried out.

6. *Women's Building.*—A women's building, which will be used chiefly for the physical training of the women of the University, is urgently needed. It will provide gymnasium and swimming facilities, together with common rooms for the general activities of all the women of the University, such as are provided for the men in the north section of Hart House. This building should probably be placed on the north side of Hoskin Avenue, where it will be centrally situated. Already the Governors have set aside $125,000 for the erection of this building.

The need for the erection of the foregoing buildings is so immediately urgent that construction should be begun upon them at once. The necessity for the following is hardly less pressing:

7. *Union and Residence for University College Women.*—The Union for University College women is now so crowded that its usefulness is being seriously interfered with. Already a committee of the women graduates of University College and friends have inaugurated a plan for raising funds to help in the erection of a new Union on the corner of Hoskin Avenue and St. George Street. Residences for women should be attached to this, and should be extended South on St. George Street as opportunity permits.

8. *Residences for University College Men.*—University College, with its attendance of several hundreds of men from outside the city, has no special residence accommodation. If it is to retain its identity and spirit in competition with the other colleges such a residence is a necessity.

Unlike other university buildings residences for men and women are self-sustaining when once erected.

9. *Removal of Geology and Mineralogy to Royal Ontario Museum.*—The removal of the Departments of Geology and Mineralogy to a wing to be erected in extension of the south side of the Royal Ontario Museum will not only bring these departments into more immediate contact with their great collections in the Museum, but also will release space in the Chemistry and Mining Building on College Street which can be used for the pressing needs of Chemical Engineering and other departments in the Faculty of Applied Science.

10. *Medical Building at Hospital.*—In order to meet the necessary expansion in the clinical departments of the Faculty of Medicine, namely, Medicine, Surgery, Gynaecology and Obstetrics, a new building for laboratories should be erected in extension of the present Pathological Building on university property at the South-west corner of the grounds of the Toronto General Hospital. The Department of Pharmacy and Pharmacology would probably be transferred to this building. The gift made by the Rockefeller Foundation for the development of the Faculty of Medicine renders urgent the erection of this building.

11. *Chemical Building.*—Though at present the Chemical Building, which is used by Arts and Medicine, is sufficient to meet immediate needs, extension will be required before long.

12. *Library.*—In the present Library building the stack-room accommodation is exhausted, and when the shelves will have been filled within a short time addition to the stack-room will become necessary.

Ontario College of Education—

(1) Five rooms for Household Science course, one additional room for the Art course, three additional rooms for the High School Assistants' course.

(2) Gymnasium, Assembly Hall and Educational Library.

(3) A Kindergarten and two class-rooms (Grades I and II).

ENDOWMENT, INCOME, EXPENDITURE, REGISTRATION.

(*a*) The amount and nature of the University endowment is as follows:

1. Site Lands, Buildings and Contents:	
(*a*) The University site lands, valued mainly on a basis of 40 cents per superficial foot (with some later items at cost price)	$1,294,726 00
(*b*) The various University buildings valued approximately at cost	3,580,306 52
(*c*) The library, apparatus and other departmental equipment, furniture, etc.	549,146 42
(*d*) The Central Power Plant	397,898 50
(*e*) The Connaught Laboratories	75,000 00
	$5,897,077 44

2. Unproductive Lands, consisting principally of the remainder of the old Upper Canada College block, 103 feet on King Street, carried in the books at $50,000, but probably may realize more if a sale can be effected; also a few lots in Port Hope and other townships	57,067 42	
3. Leased Properties, including the Queen's Park lands	637,734 53	
4. Investments, Cash and Accounts Receivable	930,878 69	
5. Superintendent's Stores	13,297 36	
		$7,536,055 44

From this total there require to be deducted the following liabilities and trust funds:

(*a*) Liabilities (present value) under Annuity debentures issued to provide funds for buildings	927,562 44	
(*b*) Scholarship and other Trust Funds	347,742 53	
(*c*) Retirement Fund accumulations	30,192 56	
(*d*) Equipment Funds (University Press, Connaught Laboratories and Organ Fund)	115,377 96	
(*e*) Contingent Funds, etc.	4,768 29	
		1,425,643 78
Leaving the General Endowment as (30th June, 1920)		$6,110,411 66

(*b*) The various sources of revenue are the following:

Legislative and Government Grants,
Investment and Land Income,
Fees of Students, University and University College,
Residence Dues,
Central Power Plant Receipts,
Casual Items.

The receipts under these heads in 1919-20 were:

Legislative Grant, University Act, 1906	$500,000 00	
Legislative Grant, 60 Vict., Cap. 59	7,000 00	
Grant by Provincial Government on account of Faculty of Education	15,000 00	
Grant by Provincial Government for Special Course in Household Science	5,400 00	
Investment and Land Income	62,508 00	
Fees, University and University College	382,559 00	
Men's Residences	15,211 00	
Women's Residences	24,159 00	
Women's Union	17,491 00	
Central Power Plant	34,821 00	
Casual Revenue	4,371 00	
	$1,068,520 00	
Deduct interest written to Scholarship and other accounts	12,695 00	
		$1,055,825 00

The fees per student in the different Faculties range from $10.00 to $150.00, according to the subject or course taken.

(*c*) The cost of the various Faculties and Departments of the University, including Administration, for the year 1919-20, is shown in the attached table.

Revenue Expenditures, 1919-20.

I. Administration:	Appropriation	Supplementary	Unused	Total
1. Salaries	$94,300 00	$525 86		$94,825 86
2. Pensions and Ret. Allowances	15,050 00	400 00		15,450 00
3. President's Office	350 00	23 00		373 00
4. Bursar's Office	2,200 00	4,570 21		6,770 21
5. Registrar's Office	4,650 00	406 00		5,056 00
6. Superintendent's Office	750 00	1,232 71		1,982 71
7. Library	50,900 00		17,124 03	33,775 97
8. Gymnasium and Students' Union, Hart House	8,200 00		248 68	7,951 32
9. Convocation Hall	2,525 00		51 39	2,473 61
10. Grounds	14,600 00	2,889 84		17,489 84
11. Examinations	12,250 00	5,455 78		17,705 78
12. Convocation Expenses	1,000 00	1,603 76		2,603 76
13. Receptions to Societies	1,000 00	27 38		1,027 38
14. Telephones	3,800 00	1,342 01		5,142 01
15. Insurance	9,000 00	865 06		9,865 06
16. Advertising Expenses	1,300 00		380 85	919 15
17. Aid to Publications and Societies	1,350 00		450 00	900 00
18. University Studies	3,000 00	755 67		3,755 67
19. Law Costs	500 00	640 37		1,140 37
20. Travelling Expenses	1,650 00		445 72	1,204 28
21. Senate Elections	1,200 00		557 20	642 80
22. Roll of Service	2,700 00		566 42	2,133 58
23. Alumni Association	5,200 00	100 00		5,300 00
	$237,475 00	$20,837 65	$19,824 29	$238,488 36
II. Faculty of Arts:				
24. Salaries	$370,022 00	$4,512 08		$374,534 08
25. Retiring Allowances	....	....	....	....
26. Main Building	11,700 00	7,411 75		19,111 75
27. Biological Building and Department	9,635 00	1,784 92		11,419 92
28. Sub-Department of Botany	4,650 00	2,141 07		6,791 07
29. Biochemistry Department	5,500 00	635 58		6,135 58
30. Physiology Department	3,200 00	67 30		3,267 30
31. Chemical Building and Department	10,775 00	1,903 88		12,678 88
32. Sub-Department of Physical Chemistry	500 00	80 27		580 27
33. Physics Building and Department	11,700 00	2 697 35		14,397 35
34. Sub-Department of Astrophysics	850 00		47 59	802 41
35. Geological Department	400 00	457 29		857 29
36. Mineralogical Department	1,000 00		577 88	422 12
37. Philosophical and Psychological Dept.	550 00	215 36		765 36
38. Mathematical Department	30 00		10 75	19 25
39. Sub-Dept. of Mechanics	400 00		235 83	164 17
40. Political Science Building and Department	2,650 00		804 78	1,845 22
41. History	75 00		19 18	55 82
42. Italian and Spanish	25 00	10		25 10
43. University College Depts.	420 00		224 60	195 40
44. University College General Expenses	350 00		196 20	153 80
45. Trinity College Service	525 00	328 84		853 84
	$434,957 00	$22,235 79	$2,116 81	$455,075 98

	Appropriation	Supplementary	Unused	Total
III. Faculty of Medicine:				
46. Salaries	$87,060 00		$16,381 34	$70,678 66
47. Retiring Allowances	....	....	....	....
48. Anatomy	2,750 00		371 84	2,378 16
49. Pathology and Bacteriology	2,260 00	175 57		2,435 57
50. Chemical Pathology	1,500 00		70 34	1,429 66
51. Pharmacy and Pharmacology	650 00	224 43		874 43
52. Medicine		13,000 00		13,000 00
53. Ditto, Maintenance of Building, 1 Queen's Park		1,084 56		1,084 56
54. Surgery	450 00		147 09	302 91
55. Obstetrics and Gynaecology	300 00		190 33	109 67
56. Ophthalmology	100 00		100 00	....
57. Oto-Laryngology	200 00	58 84		258 84
58. Therapeutics	100 00	49		100 49
59. Hygiene	2,600 00		296 91	2,303 09
60. Medical Jurisprudence	....	....	....	....
61. Medical Building	6,025 00	881 70		6,906 70
62. Pathological Building	7,925 00	142 00		8,067 08
63. General Expenses	2,100 00	606 23		2,706 23
64. Summer Session in Medicine	1,500 00		10 00	1,490 00
	$115,520 00	$16,173 90	$17,567 85	$114,126 05
IV. Faculty of Applied Science:				
65. Salaries	$147,000 00	$10,650 55		$157,650 55
66. Mining (C. & M.) Building	6,350 00	782 63		7,132 63
67. Engineering Building	4,250 00	768 55		5,018 55
68. Old Y.M.C.A. Building		491 72		491 72
69. Thermodynamics Building	1,925 00		$59 84	1,865 16
70. Geodetic Observatory Bldg.	440 00		77 57	362 43
71. Electrical Engineering	4,650 00		60 99	4,589 01
72. Mechanical Engineering	2,000 00	314 94		2,314 94
73. Applied Mechanics	800 00	704 21		1,504 21
74. Mining Engineering	1,000 00	663 54		1,663 54
75. Metallurgical Engineering	1,000 00		122 34	877 66
76. Ferro-Metallurgy	....	....	....	....
77. Surveying	11,110 00	317 04		11,427 04
78. Applied Chemistry	3,500 00	934 04		4,443 04
79. Electro-Chemistry	1,750 00	382 36		2,132 36
80. Architecture and Drawing	800 00	1,149 00		1,949 00
81. Engineering Physics and Photography	1,850 00		859 76	990 24
82. General Expenses	1,200 00	1,634 09		2,834 09
	$189,625 00	$18,801 67	$1,180 50	$207,246 17
V. Faculty of Household Science:				
83. Salaries	$14,200 00		$200 00	$14,000 00
84. Household Science Building and Department	8,200 00	$425 21		8,625 21
	$22,400 00	$425 21	$200 00	$22,625 21
VI. Faculty of Education:				
85. Salaries	$89,740 00		$1,205 67	$88,534 33
86. Education Building and Department	22,600 00		53 64	22,546 36
	$112,340 00		$1,259 31	$111,080 69
VII. Faculty of Forestry:				
87. Salaries	$12,250 00		$1,000 00	$11,250 00
88. Forestry Building and Dept.	4,250 00		236 89	4,013 11
	$16,500 00		$1,236 89	$15,263 11
VIII. 89. Faculty of Music	$2,000 00		$231 35	$1,768 65

IX. University Extension and Social Service:				
90. University Extension	$10,000 00		$1,101 94	$8,898 06
91. Social Service Building and Department	6,950 00	$1,270 00		8,220 20
	$16,950 00	$1,270 00	$1,101 94	$17,118 26
X. Residences and Dining Hall:				
92. Men's Residences	$7,650 00		$456 59	$7,193 41
93. Women's Residences	29,600 00	$2,285 54		31,885 54
94. Dining Hall		4,179 23		4,179 23
95. University College Women's Union	17,052 00	3,519 56		20,571 56
	$54,302 00	$9,984 33	$456 59	$63,829 74
XI. 96. Royal Ontario Museum	$20,000 00	$2,473 49		$22,473 49
XII. 97 Central Light, Heat and Power Plant ....,	$83 600 00	$1,080 95		$84,680 95
XIII. 98. Contingencies and Miscellaneous	$5,000 00	$5,699 31		$10,699 31
XIV. 99. Capital Account Charges...	$75,688 00		$88 46	$75,599 54
XV. 100. Special Research	$75,000 00		$16,632 42	$58,367 58
XVI. 101. Special Courses for Returned Soldiers	$5,000 00	$5,868 33		$10,868 33

RECAPITULATION.

	Appropriation	Supplementary	Unused	Total
I. Administration	$237,475 00	$20,837 65	$19,824 29	$238,488 36
II. Faculty of Arts	434,957 00	22,235 79	2,116 81	455,075 98
III. Faculty of Medicine	115,520 00	16,173 90	17,567 85	114,126 05
IV. Faculty of Applied Science	189,625 00	18,801 67	1,180 50	207,246 17
V. Faculty of Household Science..	22,400 00	425 21	200 00	22,625 21
VI. Faculty of Education	112,340 00		1,259 31	111,080 69
VII. Faculty of Forestry	16,500 00		1,236 89	15,263 11
VIII. Faculty of Music	2,000 00		231 35	1,768 65
IX. University Extension and Social Service	16,950 00	1,270 20	1,101 94	17,118 26
X. Residences and Dining Hall..	54,302 00	9,984 33	456 59	63,829 74
XI. Royal Ontario Museum	20,000 00	2,473 49		22,473 49
XII. Central Light, Heat and Power Plant	83,600 00	1,080 95		84,680 95
XIII. Contingencies and Miscellaneous	5,000 00	5,699 31		10,699 31
XIV. Capital Account Charges	75,688 00		88 46	75,599 54
XV. Special Research	75,000 00		16,632 42	58,367 58
XVI. Special Courses for Returned Soldiers	5,000 00	5,868 33		10,868 33
	$1,466,357 00	$104,850 83	$61,896 41	$1,509,311 42

(*d*) REVENUES AND EXPENDITURES.

	Provincial Grant Under Act of 1906		Percentage of Total Income	Fees		Percentage of Total Income	Provincial Grant For Faculty of Education	Income from Dining Hall and Residences	Total Revenue
1906-07.......	$213,258	=	47%	$184,211	=	40%			$456,398
1907-08........	357,444	=	56%	213,219	=	33%	$15,000		642,108
1908-09.......	422,232	=	57%	224,405	=	30%	15,000	$26,578	741,155
1909-10.......	500,000	=	59%	237,938	=	28%	15,000	35,712	840,307
1910-11.......	459,503	=	55%	263,907	=	31%	15,000	41,173	836,039
1911-12.......	448,325	=	52%	264,895	=	31%	15,000	55,717	854,594
1912-13.......	423,070	=	51%	269,754	=	33%	15,000	59,222	828,788
1913-14.......	435,667	=	51%	274,938	=	32%	15,000	62,078	845,340
1914-15.......	488,725	=	54%	269,836	=	30%	15,000	68,024	905,049
1915-16.......	500,000	=	58%	215,312	=	25%	15,000	59,252	856,870
1916-17.......	500,000	=	58%	188,425	=	22%	15,000	70,292*	854,753
1917-18.......	500,000	=	55%	185,573	=	20%	15,000	105,102*	909,467
1918-19.......	500,000	=	50%	235,901	=	24%	15,000	133,433*	984,734
1919-20.......	500,000	=	47%	382,559	=	36%	15,000	56,860	1,055,825

	Capital Account Charges	Residences and Dining Hall	Total Expenditure	Surpluses	Deficits	Amount from Succession Duties that would have been received
1906-07............			$411,696	$44,701		—
1907-08............			613,344	28,763		—
1908-09............		$34,223	679,867	61,287		—
1909-10............	$25,260	33,755	752,183	88,124		—
1910-11............	36,122	35,303	777,810	58,229		—
1911-12............	54,132	47,141	875,849		$21,255	—
1912-13............	63,405	50,584	912,995		84,207	—
1913-14............	65,930	53,595	931,452		86,112	—
1914-15............	67,193	59,432	949,630		44,621	—
1915-16............	71,668	52,636	912,359		55,489	$510,282
1916-17............	74,418	62,966*	946,447		91,694	690,799
1917-18............	75,995	94,700*	1,076,225		166,758	1,008,122
1918-19............	75,585	115,525*	1,191,602		206,869	1,208,647
1919-20............	75,600	63,830	1,509,311		453,486	1,452,989
						$4,870,839

Disposition of accumulated surpluses to 1911:

Returned to Capital account, amount borrowed *re* Physics building	$118,945 85	
Extras on Thermodynamics building	12,720 65	
Separation of accumulated surplus fees in Music towards Organ Fund	7,172 62	
(Balance applied on deficits)	$138,839 13	
Deficits as above		$1,211,578 68
Less balance from surpluses ($281,106.87-$138,839.13)		142,267 74
		$1,069,310 94

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*Note—Military in occupation of Dining Hall and Men's Residences during portion of 1916-17 and 1918-19, and whole of 1917-18.

Special Government Grants:

1913-14	$80,000 00	
1915-16	80,000 00	
1916-17	100,000 00	
1917-18	200,000 00	
1918-19	200,000 00	
1919-20	400,000 00	
		$1,060,000 00
Balance of deficit unmet on 30 June, 1920		$9,310 94

The University Act, 1906, provided that for the purpose of making provision for the maintenance and support of the University and of University College there should be paid to the Board yearly commencing 1 July, 1906, a sum equal to fifty per cent. (50%) of the average yearly gross receipts of the Province from Succession Duties, the average to be determined by and be based upon the gross receipts from such Duties of the three years ended on the 31st day of December next preceding the day on which the first instalment of the year is to be paid.

This provision was limited by an amendment in 1914 to a maximum of Five hundred thousand dollars ($500,000) in any year.

Had the above not been modified the University would have received $1,310,839 additional.

(*e*) GRANTS FOR BUILDINGS.

The Grants received from the Provincial Government for buildings during the last 15 years have been the following:

(1) Annuity Certificates of $30,000 per annum for 30 years from 1905. These realized upon sale the sum of $579,384.21, which was disposed of as follows:—

I. University Buildings:	
(*a*) Towards cost of Convocation Hall and Examination Wing	$110,914 64
" Physics Building	45,000 00
" Forestry Building and Plant Houses	21,101 65
" Men's Residences and Furnishings	60,238 33
" Women's Residences	30,129 32
Removing Geodetic Observatory to new site	12,000 27
	$279,384 21
(*b*) The Erection of New Electrical Engineering Building, 1920	350,000 00
	$629,384 21
II. The Toronto General Hospital:	
(*a*) From above Debentures	$250,000 00
(*b*) Special Grant on Capital Account, 1920	125,000 00
	$375,000 00

III. The Royal Ontario Museum:

The Government also contributed $197,973.12 being (approximately) one-half the cost ($399,970.81) of the erection of the Royal Ontario Museum, the University contributing the remainder including $50,000 realized from the above debentures.

(*f*) The values attached to the various University Buildings are as follows:

Household Science building	$455,000 00
Main building	450,000 00
Chemistry and Mining, with adjacent building	384,736 89
Physics building	363,945 85
Library building	327,425 50
Convocation Hall and Examination Wing	214,866 22
Education building	184,383 47
Education building annex	6,698 63
Pathological building	169,694 38
Medical building	165,000 00
Biological building	129,745 30

Thermodynamics building	$119,017 21	
Chemical building	77,469 88	
Engineering building	50,000 00	
Electrical Engineering building*	126,304 23	
Forestry building	30,101 65	
Botanical building	13,000 00	
Geodetic Observatory building	12,000 27	
Political Science building	11,933 26	
Social Service building	7,500 00	
Men's Residences	170,000 00	
Women's Residences	93,945 83	
University College Women's Union	13,521 18	
Argyll House	10,450 00	
Y.M.C.A. building	1 00	
No. 1 Queen's Park (Department of Medicine)	6,075 77	
	$3,592,816 52	
Less balances of purchase money yet due on Social Service building, 184 College Street, and Argyll House	12,510 00	
		$3,580,306 52

(*g*) COST PER STUDENT IN EACH FACULTY.

Arts.

It is difficult to arrive at a very close approximation of the cost per student in each Faculty inasmuch as certain departments which serve several Faculties are classed under the Faculty of Arts, but making a deduction for instruction of students of the Faculty of Medicine in the Departments of Physics, Chemistry, Biology, Bio-chemistry and Physiology and for the Faculty of Applied Science in Mathematics and Mechanics, Geology, and Mineralogy, it may be estimated that the expenditure for the Faculty of Arts was in the neighbourhood of $365,000. The students in attendance in Arts numbered 2,158. The cost per student in Arts would be about $170.

The cost of individual students in Arts varies much more than in any of the other Faculties because of the variety of courses taken, and the non-laboratory courses are much less expensive than the scientific courses.

No fees are received by the University for tuition in university subjects given to the students of the Federated Universities; on the other hand the Province has not to pay for their instruction in college subjects.

Medicine.

Adding $80,000 as a deduction from Arts for instruction given to medical students the total expenditure for Medicine in 1919-20 was $194,000. The number of students in this Faculty was 1,284. The cost per student would be $150, but assuming that the number will soon fall to 750 and that the expenditure remains the same the cost per student would be about $260.

Applied Science.

Adding the proportion from Arts to Applied Science for instruction given to Applied Science students the total expenditure was $216,000. The number of students in this Faculty was 819, and the cost per student would be $270.

Forestry.

Total expenditure $15,263; the number of students 50; and the cost per student $300.

Household Science.

There are no regular students as these are included in the Faculty of Arts, and there were only occasional students. By the will of the late Mrs. Massey Treble the interest of $100,000 has been left for the maintenance of this Faculty.

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*In course of construction. Final cost will probably reach $350,000.

The average cost per student for administration is about $46. Therefore, the total cost per student without including interest on buildings and land is:

Arts	$170 +	$46 =	$216
Medicine	260 +	46 =	306
Applied Science	270 +	46 =	316

Deduct Fees:
Arts $50 to $60.
Medicine $150.
Applied Science (average $112).

Deduct 1/14 of residue as income from endowments, etc.:
Arts $11-12.
Medicine $11.
Applied Science $14.50.

Total cost to Province exclusive of interest on buildings and land:
Arts $145 or $154.
Medicine $145.
Applied Science $189.50.

(*h*) THE SCALE OF PROFESSIONAL SALARIES ADOPTED BY THE BOARD 27TH MAY, 1920:

Lecturer	$1,800 to $2,500
Assistant Professor	2,700 to 3,500
Associate Professor	3,700 to 4,600
Professor	4,800 to 5,500
Some Heads of Departments to go to	6,000

The President to receive a salary of $10,000 with free house, heat and light.

Present salaries of the following:

The Bursar	$4,750 +	bonus $500
The Registrar	4,250 +	" 750
The Librarian	4,250 +	" 750
The Superintendent	4,000 +	" 800

(*i*) SCHEDULE OF REGISTRATION OF STUDENTS, 1899-1920.

Faculty or Department.	1899-00	1904-05	1909-10	1914-15	1919-20	1920-21
Arts—Regular and Occasional	763	1,198	2,149	2,161	1,925	2,024
Summer Session and Teachers' Courses	...	....	....	....	64	99
[1] Graduate Studies	...	....	....	....	169	150
Medicine	313	652	641	660	1,284	1,009
[2] Applied Science and Engineering	193	483	729	563	819	806
Household Science	...	....	86	96	....	....
Education	...	....	236	412	423	68
Forestry	...	....	39	48	48	54
Music	...	....	....	....	20	11
Social Service	...	....	....	293	335	354
Returned Soldiers' Matriculation Class	...	....	....	....	172	
Summer Session (Conducted for Department of Education)	...	....	164	243	....	
Total (Less duplicate registrations)	1,269	2,333	4,044	4,428	5,237	*4,566

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[1] Included in the Faculty of Arts until 1916.

[2] School of Practical Science until 1903.

*The reduction in this total from the total of 1919-20 is due to the following causes:

1. The removal of non-graduate students (350 approx.) from the Ontario College of Education.
2. The transfer of the teaching of Anatomy to students in Dentistry (200 approx.) from the Faculty of Medicine to the School of Dentistry.
3. The discontinuance of the returned soldiers' Matriculation Class (172).

Schedule of Staff, 1899-1920.

Faculty or Department.	1899-00	1904-05	1909-10	1914-15	1919-20	1920-21
Arts—University and University College	50	87	136	146	182	186
Victoria College	14	14	20	24	23	25
Trinity College	...	19	14	21	18	15
St. Michael's College	...	....	11	9	22	22
Medicine	40	96	124	145	189	197
Applied Science	14	27	67	73	73	79
Household Science	...	....	9	8	11	9
Education	...	....	46	26	32	29
Forestry	...	....	2	2	4	3
Music	...	....	....	....	....	5
Social Service	...	....	....	....	14	3
	118	243	429	454	568	*573

BENEFACTIONS TO THE UNIVERSITY OF TORONTO.

It is often said that a University supported by the Government does not receive large benefactions from private donors. This is emphatically not the case with the University of Toronto as is evident from the following gifts which have been received during the past fourteen years.

Two of the three men's residences were given, one by E. C. Whitney, Esq., and Mrs. Whitney, and the other by friends of the University among whom were several of the Governors; each of these buildings cost $50,000.

The Household Science Building, which at the time of its erection must have cost nearly $500,000, was given by Mrs. Massey Treble and opened in 1912, and in her will there was a legacy of the interest on $100,000 for the maintenance and development of this Department.

In 1917 the Connaught Antitoxin laboratories, together with a farm of fifty-eight acres, the cost of which amounted to at least $75,000, were given by Col. A. E. Gooderham, a Governor of the University. Also during the years 1918-19 and 1919-20, Col. Gooderham provided a laboratory with equipment for the Research Department of Zymology.

Of all the gifts to the University the most magnificient is the Hart House, which has been designed and constructed on such a scale as to make it a unique building for its especial purpose among those of the universities of the world. It is probably one of the most munificent individual gifts that has been made to any university on this continent. While the Governors have not been informed as to the cost of the structure, furnishing and equipment, it is probable that it should be estimated at not less than $1,500,000.

Sir John Eaton, a Governor of the University, and Lady Eaton have undertaken to give $25,000 a year for twenty years to maintain the Department of Medicine in the University, a total of $500,000.

Over a period of five years the sum of nearly $50,000 was given for research in clinical medicine by five donors, Sir John Eaton, Sir Edmund Osler, Col. R. W. Leonard, J. L. Englehart, Esq., and Dr. Geo. E. Cook, of whom the first three were Governors.

Sir Edmund Osler has for five years given $1,000 a year for two graduate fellowships and for three years $1,000 a year for Research in Pathology.

From 1901 until 1919 Sir Joseph Flavelle gave an annual post-graduate fellowship of $750 a year, the amount of the final award being raised to $1,500. For three years he gave in addition a post-graduate fellowship of $500.

Col. Leonard has for five years given a post-graduate fellowship of $500 a year and for one year he paid the salary of a lecturer in Chemical Metallurgy; he also provided the equipment for the Cadet Corps of the University of Toronto Schools.

Mrs. H. D. Warren, in addition to large benefactions to the Museum, and to the University War Memorial Fund, provided a salary of $3,000 a year for four years for the salary of the Director of the Social Service Department.

Through the advice of the late Mr. Z. A. Lash, one of the Governors of the University, a bequest of $25,000 was made from the E. C. Walker Estate.

Last year the Alumni Association raised a fund for a War Memorial which already has amounted to nearly $335,000. To this Sir Edmund Osler and Col. Leonard contributed each $25,000, and Sir John Eaton $10,000.

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*Figures for the present session are approximate, as certain appointments have still to be made.

In memory of Dr. Richardson, his daughter, Mrs. Freeland, gave $10,000 to found a fellowship in Anatomy, and an unknown donor has given $10,000 to found a scholarship connected with the Guelph Collegiate Institute in memory of the late Col. John MacCrae.

By the will of the late Dr. W. J. Mickle, of London, a distinguished graduate of the University of Toronto, a legacy of $50,000 has accrued to the University to found two Fellowships, to be called respectively the Charles Mickle and the Ellen Mickle Fellowships. The latter of these is to be given to the student highest in Medicine for the purpose of post-graduate research. The former is to be awarded annually by the Faculty of Medicine to that member of the medical profession who will be deemed to have made the most valuable contribution to the science of medicine during the preceding ten years.

The late Mrs. Marfleet, of Illinois, gave $5,000 to found the Marfleet lectureship in memory of her husband.

The University Base Hospital was splendidly equipped by friends of the University, over $150,000 having been raised, of which $40,000 was given by a graduate, A. C. Hardy, Esq., of Brockville, and Mrs. Hardy.

Many other smaller donations have been received, giving evidence of the deep interest taken in the University by members of the Board of Governors, graduates, and citizens generally. Also groups of Alumni in the United States, or belonging to the Faculty of Applied Science, have from time to time contributed graduate fellowships for research work in science.

The Royal Ontario Museum is intimately connected with the University of Toronto which bears one-half of the expense of its maintenance. It is surpassed by only one, or perhaps two, museums on this continent. Its contents, which are of varied and extraordinary interest, have been acquired for the most part through the generosity of citizens of Toronto, several of the chief donors being Governors of the University. It is almost impossible to place a money value on the contents of the different museums, but probably they could not be replaced for several millions of dollars, and in many cases the exhibits are unique.

While the Toronto General Hospital is under the direction of its own Board of Trustees it is very closely associated with the University and is indispensable for the instruction of its students in medicine. Towards the erection of these magnificent buildings $2,250,000 in private subscriptions have been received, several of the largest subscribers being gentlemen who are on the University Board of Governors.

Since the year 1906 the total amount granted to the University by the Legislature of the Province has been in the neighbourhood of $7,450,000. During the same period the gifts to the University, apart from the Ontario Museum and the Toronto General Hospital have been, on a moderate estimate, about $3,400,000. If these two institutions, so closely associated with the University, were included, as much more should be added, with the result that private benefactions direct or indirect have nearly equalled the outlay of the Province.

COMMUNICATIONS FROM VICTORIA AND TRINITY UNIVERSITIES AND ST. MICHAEL'S COLLEGE.

(1) *Victoria University.*

President Falconer,
University of Toronto,

Victoria College,
Toronto,
Dec. 1st, 1920.

In the matters which are now before the University Commission, recently appointed, I desire to lay before you the interests of Victoria College.

Victoria University entered into Federation with the University of Toronto because Toronto University was the property and care of the people of the Province of Ontario. The debates and correspondence in the press in connection with the action then taken by the Methodist Church bring out clearly two considerations which appeared to justify Federation and the action of Victoria with reference to the same. In the first place it was felt that if Victoria, and other Universities, would accept the conditions of Federation and move to Toronto, the way would be open for the first time for the people of this Province to build up one great, strong, adequately equipped University. Distracting counter interests created by the Church Universities would disappear, and the Legislature of the Province would be free to make all needed money grants with a generous hand. The second reason, of course, was that Victoria College believed that it would be to the advantage of her own students to share in the advantages and prestige of such a great Provincial University as would thus be created in the course of time. It did not occur to the friends of Victoria at that time, or if it did it was dismissed as too great an improbability, that the time would come when her students would find themselves handicapped in the University by reason of inadequate provision for the proper maintenance of the University. She came in to share not the poverty (she had enough of that of her own) but the prestige of a great and distinguished University. It cost Victoria very much, not in money, but in that University sentiment and pride which the long years of her history had created for her. She has a right to feel aggrieved, and deeply aggrieved, when University classes in which her students share, are altogther too large for efficient teaching.

To Victoria, Federation is a compact. She has tried to fulfil all her obligations. I think, if inquiry were made, it would be discovered that her income from her endowments and from the givings of the Methodist people year by year, is larger than any similar income in any University outside of Toronto, receiving aid from the Government of Ontario. She has done her part, not only in maintaining, but in elevating the standard of education in the University. To educate her students in the subjects assigned to the College, she is spending to-day more money per student than does the University of Toronto in University College. Surely in these premises Victoria College has a right to expect that Toronto University will receive from the Government of this Province all the money needed to make it the great and splendid University which the advocates of Federation in the Methodist Church and in Toronto University circles, predicted would surely come, and which was the hope and dream of all those who had anything to do in advancing the cause of Federation of the Universities of the Churches with the University of the State.

I cannot refrain from referring to another matter. The great and splendid gifts which in recent years have been made to the University, have come very largely from those sources from which Victoria University has derived her support. It it difficult for me to resist the impression that if Victoria had remained an independent University a very large portion of these gifts would have gone directly to her. The contention of the advocates of Federation that the coming of Victoria to Toronto would be greatly to the advantage of the University of Toronto, has been, I am sure, fully justified. I feel, therefore, that Victoria has a special right to urge upon the Commission that the first duty of this Province in higher education is to adequately and generously support the University of Toronto.

Yours sincerely,

R. P. BOWLES,
President.

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(2) *Trinity University.*

Sir Robert Falconer, K.C.M.G.,
President, University of Toronto.

Trinity College,
Toronto, 26th November, 1920.

My Dear Mr. President:

Trinity College, as one of the Federated Universities, desires you to present its claims before the University Commission.

Our chief claim lies in the fact that the Province of Ontario entered into a formal agreement with Trinity College to provide adequately in the University of Toronto for the work Trinity was asked to give up. This undertaking on the part of the Province was entered into in consideration of valuable rights both of a financial and an educational nature surrendered by Trinity College in return therefor; and the agreement remains binding on the Province as long as Trinity College continues in federation with the University of Toronto.

About 1899 and 1900 A.D. the Government of Ontario, through the then Minister of Education and others, appealed to Trinity College to strengthen the position of the Government in relation to the State University—and likewise to strengthen the work of that University also—by bringing within the one Federation Trinity Medical College which was a large and flourishing institution, and the University of Trinity College which was carrying on instruction and examination in the two Faculties of Arts and Divinity, and conducting examinations and conferring degrees in other Faculties also.

The grounds of the appeal then made to Trinity College were mainly as follows:

1. That Higher Education in Ontario would be better served by the strengthening of the University of Toronto which would result from this wider application of the University Federation Act.

2. That this closing up of the ranks would enable the Government to deal justly, and more liberally, with the State University.

3. That besides the advantages which would by Federation accrue to the teaching in the faculty of Arts, medical education also would be greatly benefited by the union of Trinity Medical College and the Toronto College of Medicine to form one Faculty of Medicine in the University of Toronto.

4. That the University of Trinity College also would benefit by pursuing the course thus recommended, inasmuch as it could always rely upon the Government to provide adequate financial support for the University of Toronto, in which the students of Trinity College at that time and in future years would fully participate.

In response to this appeal Trinity College inaugurated and supported amongst its graduates in all parts of the Dominion and elsewhere and amongst the members of the Church of England in Ontario who constitute its chief clientele, a movement which in 1903 and 1904 issued in the union of these two Medical Colleges to form the Faculty of Medicine in the University of Toronto; the establishment of Trinity College as an Arts College of the said University; the surrender by Trinity College of its degree-conferring powers in all Faculties except Divinity, and the conferring upon Trinity College of the status of a University federated with the University of Toronto and entitled to enjoy as long as such status continues all the rights and privileges present and prospective accorded to the Federated Universities by the several University Acts of the Province of Ontario and by the special agreement entered into between the Government of Ontario and the University of Trinity College in 1903 and again in 1906.

Therefore, Trinity College would respectfully submit that the Province of Ontario is under special obligation to it to provide adequately for the University of Toronto, with whose fortunes we joined our own under the circumstances herein stated. Trinity College is more especially concerned in the Faculties of Arts and Medicine, and in those features of the University in which all its constituent elements are alike entitled to participate, such as the Library, the Laboratories, the Class Rooms for University lectures, and facilities for exercise and sports on the part of the students.

The last named item is one in which Trinity College has a special claim to be heard. According to the terms under which the federation of this University with the University of Toronto was originally concluded, Trinity College was entitled to remain within its own ample grounds of thirty acres on Queen Street West and to have University lectures duplicated there for its students; but in 1906 the University Commission of that year urged us very strongly, in the interests of the University and particularly of the Faculty of Arts, to surrender that privilege and move into Queen's Park. This we agreed to do, and are now about to carry out the agreement. In doing so we are obliged to give up excellent and most ample playing fields of our own, and be content henceforth with our share in such facilities for athletics as the University may provide. These facilities, as at present existing, are rapidly becoming seriously overcrowded, and we would urge upon the Government a generous policy in securing sufficient land to meet the ever-growing needs of the students of the University for healthy outdoor exercise.

Another claim which Trinity College wishes to put forward is its right to share in the benefits of the central heating plant of the University for the new College Buildings about to be erected on Hoskin Avenue. Other Colleges and Departments of the University are supplied with heat from this system, and Trinity College would have just cause for complaint if it were discriminated against in this matter. Therefore, the College trusts that the Government will provide the University with sufficient capital to enable it to enlarge its heating plant sufficiently to answer to the many new calls now being made upon it. To do so at this juncture will doubtless prove a profitable investment in the long run, as well as an immediate act of justice.

In conclusion, Trinity College would assure the Commission of its entire loyalty to the University of Toronto, its desire to support and strengthen the University by every means in its power, and its conviction that a future big with vast possibilities, which will accrue to the benefit of the whole Province, lies before the Provincial University, if at this critical period the Province has the foresight and the wisdom to provide in no grudging spirit an adequate, just, and even generous measure of support to this great educational Institution.

I have the honour to be,

My dear Mr. President,

On behalf of Trinity College,

Your obedient servant,

T. C. S. MACKLEM,

Provost.

(3) *St. Michael's College.*

St. Michael's College,
Toronto,
Superior's Office,
December 2nd, 1920.

SIR ROBERT FALCONER,
President, University of Toronto.

DEAR SIR ROBERT:

In view of the coming investigation into university conditions by the Government Commission, I feel it my duty to represent to you that St. Michael's College went into the University under definite assurances from the University and from the Government, and that she would have good reason for complaint if the other parties failed on their part.

It is a fact that federation was a difficult and complex problem. All sections of the Province had to be brought to a willingness to see the Government concentrate its efforts on one Provincial University. The entrance of St. Michael's, as representing a considerable proportion of the population, was no small factor. How important it was from our point of view may be seen from the fact that it was the first Catholic college anywhere to take such a step. We gave up all hope of independent existence. In return the Government was to provide the best for our students in non-college subjects in Arts and the best for our young men and young women in other faculties. In the present impoverished state of University finances the Government does not seem to be doing its part.

I trust that after this investigation the Government's attitude will be more in accord with the spirit of federation.

Yours very truly,

H. CARR,
Superior.

UNIVERSITY COLLEGE, TORONTO.

In reference to the needs of University College which will come up for consideration by the new Commissioners appointed to report on the University and its finances, I beg to present the following as the most urgent and immediate necessities of the College.

(1) Enlarged accommodation for lecture rooms: the surrender this session of a large lecture room (No. 13) to the Bursar's department has rendered this question acute, and it is only by trespassing on the Medical Faculty and its large room that our work in English is carried on at all. We require at the earliest possible date the completion of the quadrangle on the north side, which would provide presumably some six fair-sized lecture rooms and twice as many small private rooms for the staff; who for the most part at present have half of one small room. The needs of the College will ultimately require that it occupy the whole College building, at present largely usurped by the Registrar, Bursar and Superintendent; but the smaller change, the completion of the quadrangle, cannot be deferred.

(2) The University draws a considerable portion of its revenue from the tuition fees of the students of the College; the number of these students must be adversely affected when another resident college is established on the University grounds. The security for the number of University College students and the income thereby received will disappear in a year or two, when Trinity College takes its place on its new site. Residences for University College will become necessary, if the University is to receive anything approaching its present tuition fees. Obviously a residence is desirable on other grounds as well, especially in a University which makes so little provision for its students in this direction; and provided the new residences be large enough to give board and lodging to several hundred students, the difficulties which arose in connection with the very small residence for men in old days and led to its relinquishment, need not be anticipated.

(3) The previous paragraph has been concerned with residences for men; but in a certain sense the women students of University College have more pressing claims for further accommodation than the men; for though Queen's Hall and other houses may give shelter to a larger fraction of the women than the men's residences give in the case of the men, on the other hand the women students have nothing to compare adequately with Hart House. These residences may contain perhaps half the number of women for whom provision should be made, but 85 St. George St., their Union building, cannot begin to hold even this fraction of their number. A new Union for women is urgently needed.

(4) I have not said anything of the serious problems existing to-day in connection with the social activities of University College, and arising solely out of the lack of halls and space sufficient to entertain its thousand and more students; the University School is quite inadequate; Hart House, by the terms of its foundation is not available; but none the less the difficulty is a serious and an increasing difficulty; and such Residences, as I have mentioned, seem the natural solution and almost the only solution. All of which is respectfully submitted for the consideration of the Commissioners.

MAURICE HUTTON,

Principal.

THE UNIVERSITY OF TORONTO LIBRARY.

SUMMARY.

At times of expansion hitherto the needs of the Library have been underestimated. The demands upon it are constantly increasing with new requirements as to affording help to students.

1. The fund for the purchase of books is far too small—now only $18,000, and actually much below the purchasing power of the annual amount granted before the war. The number of volumes added is not much more than one-third of the lower figures among the leading State Universities. An increase will be necessary if graduate work is to be carried on and undergraduates are to be given larger assistance.
2. Need of building expansion—Reserved reading rooms, private rooms for graduate study, and more seminary rooms with stack-room.
3. Administration staff and accommodation inadequate. Staff only 17. Michigan has 62 with part-time undergraduate service in addition. The staff should be doubled in size.

MEMORANDUM.

In any attempt to foresee and provide for the expansion of the University Library during the next ten or fifteen years, it should be borne in mind that in the past the extent of probable expansion for any similar period has always been underestimated. The building erected in 1892 was outgrown in every respect after fifteen years, although when planned it was supposed to satisfy all possible requirements for at least twenty-five years. The substantial additions made in 1908-09, which doubled the size of the original building, are beginning after twelve years to prove inadequate. The steady growth of the older Faculties of the University and the addition of new ones have multiplied the demands upon Library resources in many unexpected ways, and latterly the establishment of graduate courses of research, leading to higher degrees, has introduced into Library administration a new element not previously reckoned with. Moreover, methods of bringing books to readers and readers to books are constantly being improved by the great University Libraries of this continent, which aim at rendering more and more efficient aid to the inexperienced student, with a result that a feature which in one decade is regarded as an interesting experiment may become in the next a recognized necessity for every properly organized Library. The problem, therefore, of Library planning, which formerly was limited to the provision of possibilities of liberal enlargement of book-room and reading-room space has now been complicated by the necessity of including reserved-book reading and distribution rooms, special collection rooms, departmental studies, individual studies, a Library extension department, and of providing suitable and convenient offices for a larger staff of attendants, such as is indispensable for working out all the novel features. For the purposes of this memorandum, it will be convenient to set forth the probable Library requirements of the University of Toronto in three divisions in relation to books, readers, and administration respectively.

I. The funds allotted for purchases of books for the University Library have always been less than the average for Universities of similar standing. When the war broke out in 1914, a beginning had just been made of more liberal appropriations, and a policy of yearly increases had been proposed which appeared to meet with the approval of the governing body. But the necessity of rigid economy during and since the war has prevented any such policy from being proceeded with, and the increase of the appropriation for the current year to $18,000 has not even been sufficient to match the great increase in the cost of books, periodicals and binding. In order, therefore, to bring the Library of the University of Toronto up to the standard of other state University Libraries of similar standing, there is urgent need of a much larger annual grant for the purchase of books. The following table will show how far behind in this respect the University now stands. The latest available figures are given for the American Universities, those of the year 1918-19.

Name of University.	No. of vols. in Library	No. of vols. added last yr.	Expenditure last year	Appropr. foll. yr.
Michigan	413,000	13,000	$30,000	$56,000
Minnesota	280,000	14,800	31,000	35,000
Wisconsin	260,000	11,100	25,000	26,000
Ohio	202,000	21,700	26,000	21,000
Illinois	418,000	23,400	53,000	55,000
Iowa	170,000	11,100	30,000	38,000
Toronto	160,000	4,040	11,000	18,000

The lower annual expenditure of the University of Toronto results not only in a smaller stock of new literature for the work of the year, but in a progressively inferior collection for the purposes of graduate work, which is becoming so important a part of the functions of Universities. To a certain extent this inferiority is not so marked as the statistics seem to imply, because the policy of the Library has hitherto been to spend as little money as possible in duplicating textbooks for undergraduate use, whereas the other Universities have done so freely. In the interests, however, of the undergraduate student, this policy should be altered as soon as an increase in the annual grants permit. At the present rate of annual additions, the stackroom for the books will not have to be added to for four or possibly five years.

II. The readers in the Library may be divided into three classes, members of the Faculties, graduate students, and undergraduate students. There are in use at present three large reading rooms, one for members of the Faculties, in which for their convenience the current numbers of periodicals are also kept, the other two for students, one assigned to men, one to women. There are also eight departmental studies or seminaries which are used both as rooms for small classes and as reading-rooms for honour students in the respective departments. A small collection of reference books is kept on open shelves in each departmental study. It is also intended to use two of the large basement rooms, left vacant this summer by the removal of the University Press to another building, for the purposes of special reserved-book reading-rooms for undergraduate students, in which they may find the text-books and works of reference recommended in their various courses without having to apply for them at the main Delivery Desk. The present arrangement results in much congestion at the Desk at certain hours, and the way out of the difficulty in some University Libraries is to place, under supervision, in another room away from the main reading-room and Delivery Desk, the prescribed books of all the undergraduate courses. A complete solution of the problem has not yet apparently been reached anywhere, but it is becoming recognized that it will probably be found in the principle of separating readers instead of accumulating them in a single room. Whether the two basement rooms above mentioned will be sufficient as reserved-book reading-rooms cannot yet be asserted with any confidence. It is well to bear in mind that, both at Leland Stanford University and at the University of Michigan, which have very recently erected new Library Buildings, the room provided as reserved-book room has already proved too small for the purpose for which it was planned. Profiting by their experience, the Library authorities of the University of Toronto are prepared to open not one but two rooms as reserved-book rooms, but experience alone can show whether further provision should not be made in the next extension to the present building for other separated reading-rooms, perhaps in the form of a connected series of smaller rooms to insure greater quiet than can be obtained in large rooms where readers are constantly coming and going. The departmental studies or seminaries mentioned above are now too few and too small for the classes that use them. In any future extension of the building provision should probably be made for other departmental seminary or study rooms in closer connection with the stack-room. A novel feature of the last addition to the building, erected in 1908-09, was a series of small private study-rooms above the stack-room, to be used by research students. What was then an experiment has proved now a necessity, and many more similar rooms will be needed for graduate students in the literary and historical subjects whenever the next addition is planned. The whole question of what accommodation for graduate students should be provided is as yet uncertain, but there is no doubt that with the growth of graduate work in the University and from the experience of other Universities, provision must be made for great expansion in that respect.

III. The Library administration is suffering from the lack both of an adequate number of assistants and of sufficient space in which to do the work. Here again the outbreak of war prevented what would probably have been a gradual expansion of staff commensurate with the increase both of book funds and the number of readers. The present Library staff is quite insufficient to carry on all the duties devolving upon it. Only the essential routine work can now be kept up to date, while other things which can bear postponement have to be put aside until additional assistance is obtained. New and desirable features of Library service cannot be undertaken at all. Among these may be mentioned special assistance to undergraduate readers in reference work, and Library extension service to graduates and others outside of Toronto. Other Universities have devoted much attention and money to both these enlargements of the usefulness of a University Library. The staff of the Library numbers at present 17 persons. The University of Michigan Library has a staff of 62, some of whom are doubtless employed in departmental libraries in other University buildings, but, in addition to the regular staff of 62, it also employs a large number of undergraduates on less than full time and these are not included in the above figure. It is safe to say that no University Library in the United States of similar standing to the University of Toronto attempts to carry on its work with less than twice the staff at present employed here. The office space is also in need of enlargement. Some of the existing rooms are as full as the nature of the work carried on in them will permit. The removal of the University Press has set free a small room in the basement, which is being fitted up for work hitherto very unsuitably done in the Faculty Reading Room. In the next addition to the Library building, a liberal estimate should be made for administration rooms.

THE FACULTY OF MEDICINE.

Medical Course. Part I.

The education of competent physicians and surgeons involves much more than a training in the use of established methods. The medical faculty must not only see to it that the approved methods of practice are properly learned by the student, and that ample opportunity is given him under supervision, to apply them in the clinics, but it must also provide instruction by which the student's mind shall be so trained that it can comprehend new discoveries and see their application in medical and surgical science.

It is important to point out that this training in independent thought should be given to every member of the class, and not alone to selected groups of the better students. The future advancement of medical knowledge depends as much on careful observation and investigation of the incipient stages of disease by the general practitioner, as on highly specialized research in laboratories and clinics. Detection of disease in its earliest stages and the application of therapeutic measures to combat it rest entirely with the general practitioner and he cannot do this properly unless he is thoroughly trained in powers of accurate observation and has been taught to think independently.

In order that these two functions can be performed by the medical school the latter must be provided with the following:

1. Laboratories that are sufficiently large and well equipped that each student may independently make observations of the structure of the normal body, and conduct experiments to illustrate the functions of the various organs and tissues.

2. Hospital and dispensary facilities offering a sufficient number of patients so that each student may acquire adequate practice in the diagnosis and treatment of disease.

3. A sufficient number of properly trained instructors so that adequate assistance may be given to each student to enable him to overcome the technical difficulties involved in making the observations or experiments, and to guide him in arriving at their correct interpretation and application.

Not only must the laboratories be specially equipped, each for its particular purpose, but their staffs must be composed of men who have been specially trained in that particular field of medical science.

All the departments must moreover be developed to approximately the same degree of efficiency, otherwise the training of the student will be imperfect, not only in the particular subject which may be poorly taught, but also as a whole, because of the interdependence of the courses, the one on the other. It is undesirable for a medical school to specialize along certain lines in the development of its departments. All of them must be developed according to a well thought out scheme of general efficiency if the students are to be adequately trained to deal with the many and diverse problems that arise in the practice of medicine and surgery.

Because of the fortunate association between the faculties of Medicine and Arts in this University, it is unnecessary for the former to assume any responsibility in the teaching of the premedical sciences (Biology, Physics and Chemistry). The departments which more properly compose the medical faculty are those of the fundamental medical sciences (Anatomy, Physiology, Biochemistry and Pharmacology), Pathology and Hygiene and the clinical subjects, and it is the purpose of the present report to show the extent to which the laboratory courses must be developed if the University of Toronto is to fulfil its function as a centre for the training of efficient physicians and surgeons and hygienists, who will practise in the State and Dominion. It must train not alone general practitioners for city and country district, but specialists as well.

Following these general remarks, it may be well to state the aims and purposes of the departments of the Medical School, to consider in how far these are being achieved, and then to point out by what means shortcomings and deficiencies could be remedied. A detailed statement of these matters will be found in the report of the Rockefeller Committee.

The aims and purposes of the laboratory departments are:

1. To afford every student the opportunity to carry out for himself in the laboratory the dissections, microscopical studies and experiments that are essential to practical knowledge of the structure and functions of the human body. This demands not only adequate bench space and equipment, but also the furnishing of suitable material upon which to conduct the observations.

2. To provide experienced laboratory teachers or demonstrators so that every student may receive adequate guidance and assistance in his work. In most of the subjects it is agreed by medical educators that there should be at least one teacher to every 15 students in the laboratory subjects. If the supervision of the work of the student at this stage be inadequate, it means that he will go forward to the clinic untrained in the fundamentals of medicine and surgery, and without good training in these fundamentals he can never become a really efficient clinician.

3. To expound the theory of the subject by lectures which must be thoroughly up-to-date, authoritative and well-balanced. If the lectures are merely compilations of text-book matter, they are worse than useless since they lead the student to believe that the medical sciences are stationary and dogmatic and they fail to stimulate him to independent thought. It is in the lecture theatre, more than anywhere else, that a good teacher can inspire the students to aim at high ideals in their work, and to be self-critical and exacting in its performance.

4. To conduct demonstrations, reviews and conferences in which the work done in the laboratory and the theoretical knowledge gained by attendance at the lectures, and by reading will be correlated. To carry out this part of the training properly the class should be taken in groups of 15 to 20 students each and the instructor should encourage the students to discuss with him their difficulties in comprehending the subject.

In the various laboratories of the medical department in this University, all of these ideals cannot be attained at present, for the following reasons:

1. In certain departments, especially Anatomy, Pharmacology, and Pathology, the space is grossly inadequate, even for much smaller classes.

2. Inadequate facilities exist in the laboratories of Physiology, Biochemistry and Pharmacology for conducting many important lines of research because of unsuitable quarters for the care of animals.

3. The number of properly trained laboratory instructors is inadequate (compare Rockefeller report).

4. There are relatively too few instructors of sufficient experience to conduct, with small groups of students, review classes and conferences.

There is no doubt that many of these evils will be removed when the number of students is reduced, but even if the staffs, exclusive of part-time fellows, are retained at their present strength and the number of students in each year is reduced to an average of one hundred, the ratio of instructors to students will fall far short of the accepted standard. Increase in the size of the staff is urgent in all departments.

It may be pointed out here that, with the possible exception of Anatomy, the employment of part-time fellows is highly undesirable, both from the point of view of the student that is thus appointed and of the department. When the salaries paid the part-time fellows are released, by discontinuing such positions, it will be possible to appoint a few more instructors on a full-time basis which will slightly improve the above ratio.

In their organization and equipment the laboratory departments of the Medical Faculty, with the exception of Anatomy and Pharmacology, can be considered as equal to the best in England or the United States, but they all lack in one feature that is essential to their being considered worthy of a great University, and that is in research. Their activities in this direction are hampered mainly by the lack of uninterrupted time on the part of the members of their staffs, because of the relatively large number of students that have to be trained in the essentials of the subjects. In not contributing its share to the advancement of human knowledge the Medical Department is not fulfilling one of its most important functions to the State, for unless the

Universities lead the way in original thought, not only will Medical Science stand still, but it will retrograde, as the history of all times abundantly testifies. The establishment of special research institutes that are independent of Universities can never serve to exonerate the latter from their functions in this regard, and for several reasons, among which may be mentioned, that in most such "institutes" attention is centred on special problems of a more or less applied nature, that the atmosphere is usually uncongenial to the many types of original mind, and that there is not, and through force of circumstances, never can be, opportunity to train new investigators. The last-mentioned reason in itself sufficiently emphasizes the necessity for a greater degree of research activity in the laboratories of the University. Without adequate opportunities to engage intensively in original investigation on some chosen field of his subject, the teacher fails entirely to arouse in his pupils any ambitions to engage in research. He soon comes to be regarded by the student merely as a pedant and he fails to inject into teaching anything that appeals to the imagination, and leads to independent thought.

Among the students that attend the University of Toronto, there are many in every year that could undoubtedly contribute greatly to the advancement of knowledge by original investigation, and later, by teaching, if there were greater opportunities for active research within its laboratories. These opportunities can be afforded by the appointment of *larger staffs than at present*, so that every member can have suitably long periods of uninterrupted time, free from teaching duties to devote to it. In the laboratories of Medical Science, there should be no place for men who have not contributed their share to research or are engaged in its prosecution.

In conclusion a few words may be said about the great advantage to the medical department arising out of its close association with the Connaught laboratories of Public Health. The conspicuous efficiency of this department in the preparation of antitoxins and vaccines for use by the community and the great influence which it has in promoting the control of public health by the State, depend very largely on its close association with the University. In its laboratories researches of great practical value can be conducted provided it can find suitably trained investigators to conduct them and this it is the duty of the medical school to enable it to do. Provision is made in the new Six Years' curriculum of medicine for a more extended and thorough general course in Hygiene, and for optional courses in its various branches.

In this report nothing is stated about the proposed development of the Pathological department so that it may provide laboratory facilities for the clinical departments. This is fully dealt with in the Dean's report.

MEDICAL COURSE. PART II

It became necessary at a recent date to consider the requirements for the future evolution and development of the facilities for teaching and research in the Faculty of Medicine in the University of Toronto. A Committee of the Faculty had this matter under consideration and investigated the most minute details regarding the various Departments of the Faculty. They placed on record a detailed statement of the present facilities and equipment, and the requirements which will be necessary in the immediate future if the efficiency of the various Departments is to be maintained.

The work of the Committee is embodied in an extensive report which contains in detail a statement indicating the present equipment of each Department in the Faculty. It contains a discussion of the requirements necessary for future development and gives reasons for the conclusions arrived at by the Committee. This report, which contains seventy-three folios of typewritten matter, is available for detailed study.

The report was considered by the Council of the Faculty of Medicine and, after certain amendments suggested, was adopted by unanimous vote of the Faculty.

CLINICAL DEPARTMENTS.

1. *Medicine, Surgery, Obstetrics and Gynaecology*—

These three great Clinical Departments require organization along specific lines. The ideal organization possesses certain principles which are common to all three departments. Provision for an efficient staff and adequate facilities for effective Clinical teaching become imperative.

(*a*) *Teaching*—

The teaching conducted by these Clinical Departments should provide for instruction of three classes of students.

(1) Undergraduate Medical Students.
(2) Specialist training for Junior Members of the Staff.
(3) Post-graduate study for men who have undertaken private practice.

The machinery suggested would provide for the teaching of all three classes. Increased staff is necessary, but it becomes essential that certain members of the staff should be appointed at an adequate Annual Salary for specialized work.

(*b*) *Research*—

Provision must also be made for Clinical and Laboratory Research, and in this regard the present facilities are most inadequate. If the University of Toronto is to keep abreast of other Institutions of a first-class order it must necessarily provide for the training of specialists and the conduct of Research.

(*c*) *Laboratories*—

In order that the necessary provision be made for Laboratory space it becomes essential that a building should be erected.

It is suggested that a new building be erected on the portion of the present Hospital grounds which belongs to the University. In this building will be housed suites of laboratories, one for each of the five Clinical Departments, viz., (1) Medicine, (2) Surgery, (3) Obstetrics and Gynaecology, (4) Oto-Laryngology, (5) Ophthalmology. The building will also contain a large lecture room, a museum, a library for students and staff, additional laboratory unit for the teaching of Pathology and Bacteriology, adequate space for animals, etc.

2. *Oto-Laryngology and Ophthalmology*—

The organization in this Department should embody the same principles as those detailed for Medicine, Surgery, Obstetrics and Gynaecology.

3. *Department of Pathology*—

The organization of the Department of Pathology demands a greatly increased staff.

The staff in Pathology will be so organized that provision will be made for supervision by competent members of the staff of sub-departments closely associated with the work of the clinical departments, such as Bacteriology and Surgical Pathology. Thus it is recommended that a Lecturer be appointed in Surgical Pathology. In addition to the appointments requisite for these purposes it is obviously necessary to secure such special assistants as an artist, a photographer (expert in micro-photography), a librarian and a museum preparateur. The artist and photographer will be available for clinical Departments as well as in the Department of Pathology.

4. *Psychiatry*—

The Department of Psychiatry needs much greater expansion. There is widespread interest taken in this subject by the community at large, not only in Canada, but abroad.

The recent remarkable development of this Department and the widespread interest taken in it by the community at large not only in Canada, but abroad, demand adequate provision in the teaching of the subject in the University and in the securing of hospital accommodation.

5. *Hygiene*—

This Department, though organized only on a part-time basis, is responsible for the instruction (graduate and undergraduate) in Preventive Medicine, Hygiene and Public Health, in the Faculties of Medicine, Applied Science and Engineering, Household Science, and the Department of Social Service. The scope of graduate work will be understood when it is pointed out that for the academic year, 1919-1920, ten graduate students were registered in this Department. The staff at present consists of a Professor, Lecturer, Lecturer in Industrial Hygiene and Demonstrator in Sanitary Chemistry, all on a part-time basis. No laboratory assistants or stenographer on a full-time basis have heretofore been provided.

The Research and Antitoxin Divisions of the Connaught Antitoxin Laboratories are staffed in large part by the personnel of the Department of Hygiene. These Laboratories provide adequate funds and facilities for research in Preventive Medicine and Hygiene.

For the extension of teaching and research facilities in the Department of Hygiene close affiliation with the Research Division of the Connaught Laboratories is desirable, in order that the facilities of these Laboratories may be made available for the purpose of graduate (D.P.H. and other) teaching and for Research.

Budget Indicating Present Expenditure and the Proposed Increase of Expenditure

Clinical and Final Departments

	Annual Expenditure Necessary	Present Expenditure	Increase of Expenditure Necessary.
Medicine, including Pediatrics	$60,000 00	$37,600 00	$22,400 00
Therapeutics	7,000 00	2,000 00	5,000 00
Surgery	40,000 00	11,600 00	28,400 00
Obstetrics and Gynaecology	20,100 00	4,900 00	15,200 00
Psychiatry	16,300 00	1,400 00	14,900 00
Ophthalmology	7,750 00	1,600 00	6,150 00
Oto-Laryngology	8,250 00	1,650 00	6,600 00
Radiology	8,000 00	....	8,000 00
Pathology	41,000 00	13,000 00	28,000 00
Pathological Chemistry	18,750 00	10,700 00	8,050 00
Medical Jurisprudence	700 00	700 00	....
Hygiene	15,500 00	8,000 00	7,500 00
	$243,350 00	$93,150 00	$150,200 00

Primary Departments

	Annual Expenditure Necessary	Present Expenditure	Increase of Expenditure Necessary
Physiology	$32,850 00	$16,762 00	$16,088 00
Biochemistry	23,250 00	14,900 00	8,350 00
Anatomy	30,623 00	11,423 00	19,200 00
Pharmacology, including Toxicology...	13,550 00	6,525 00	7,025 00
	$100,273 00	$49,610 00	$50,663 00
Clinical and Final Departments	$243,350 00	$93,150 00	$150,200 00
Primary Departments	10,273 00	49,610 00	50,663 00
	$343,623 00	$142,760 00	$200,863 00

This does not include expenditure for Buildings and Equipment.

THE CONNAUGHT ANTITOXIN LABORATORIES.

The Connaught Antitoxin Laboratories constitute a Department of the University of Toronto.

The Laboratories were established to provide facilities for research in Preventive Medicine, Public Health and Hygiene; and for the production of public health biological products, including diphtheria and tetanus antitoxins, smallpox vaccine, anti-meningitis serum, the Pasteur treatment (anti-rabic vaccine), anti-pneumococcus serum and typhoid and paratyphoid vaccine.

Through the generosity of Colonel Albert Gooderham, the University was provided with a farm of over fifty acres in York Township (the University Farm), on which were erected Laboratories and Stables where preparation of antitoxins and vaccines and serums is carried on under ideal conditions. The value of this gift to the University was seventy-five thousand dollars.

Part of the work of preparing these substances is carried on in the Medical Building of the University. This work is done in what is known as the Antitoxin Division of the Laboratories. There is also the Research Division, the work of which is linked up with that of the Department of Hygiene and Preventive Medicine of the University.

The Antitoxin Division of these Laboratories is, and has always been, entirely self-supporting. There has been every year a surplus on operating in these Laboratories, and this surplus has been used to establish what is known as the Connaught Research Fund, the income on which is available for the support of research in Preventive Medicine. At the present time several researches of great practical importance are being carried on in the Research Division of the Connaught Antitoxin Laboratories, and are supported by the Connaught Research Fund. Dr. Fitzgerald is engaged in a statistical investigation and follow-up study of diphtheria deaths in Ontario; Dr. Caulfield and his Associates are engaged in a study of certain important phases of the tuberculous problem; Dr. Defries has been investigating certain points with reference to smallpox virus and vaccine virus, and Mr. Moloney and Miss Hanna are studying toxin production by bacteria.

The antitoxins, vaccines and serums produced in the Antitoxin Division of these Laboratories are sold to Provincial and Local Boards of Health. In Ontario free distribution of all of these products is carried on by the Provincial Board of Health of Ontario, who obtain them at a very low price from the Laboratories. The price at which these products are sold to the Provincial Board of Health of Ontario is lower than obtained anywhere else in the world. This fact has been ascertained by Dr. J. W. S. McCullough, Chief Officer of Health of Ontario.

The Province of Saskatchewan is also supplied with diphtheria antitoxin which is distributed free in Saskatchewan by the Bureau of Public Health of that Province.

Alberta, Nova Scotia, New Brunswick and Manitoba are other Provinces whose Provincial Health Departments obtain products from these Laboratories. The same is true of the Cities of Vancouver, Edmonton, Calgary, Saskatoon, Regina, Winnipeg, and of Charlottetown, P.E.I. Certain physicians in the Province of Quebec also obtain antitoxin from these Laboratories.

The Colony of Newfoundland and several of the West Indies also obtain their supplies of antitoxin, etc., from the Connaught Antitoxin Laboratories.

During the past year considerable quantities of antitoxin have been sent to New Zealand for the use of physicians in that Dominion.

During the war most of the antitoxins used in the Canadian Army were prepared in these Laboratories.

The work of the Connaught Antitoxin Laboratories is analogous to that done in the Pasteur Institutes in France and Belgium and to that of the Lister Institute in London, with this advantage on the side of these Laboratories that the Connaught Antitoxin Laboratories are an organic part of the University, are self-supporting and provide funds and facilities for research in Preventive Medicine and also opportunity for graduate teaching in Public Health.

THE FACULTY OF APPLIED SCIENCE AND ENGINEERING.

Part I.

The Faculty of Applied Science and Engineering had its beginning in the School of Practical Science authorized by the Province of Ontario under an Order-in-Council in 1877. The School was affiliated with the University of Toronto in 1889 and by the University Act of 1906, it finally became an integral part of the University as the Faculty of Applied Science and Engineering.

General: Organization and Functions.—As now constituted there are seven regular Departments of graduation leading to the degree of Bachelor of Applied Science:

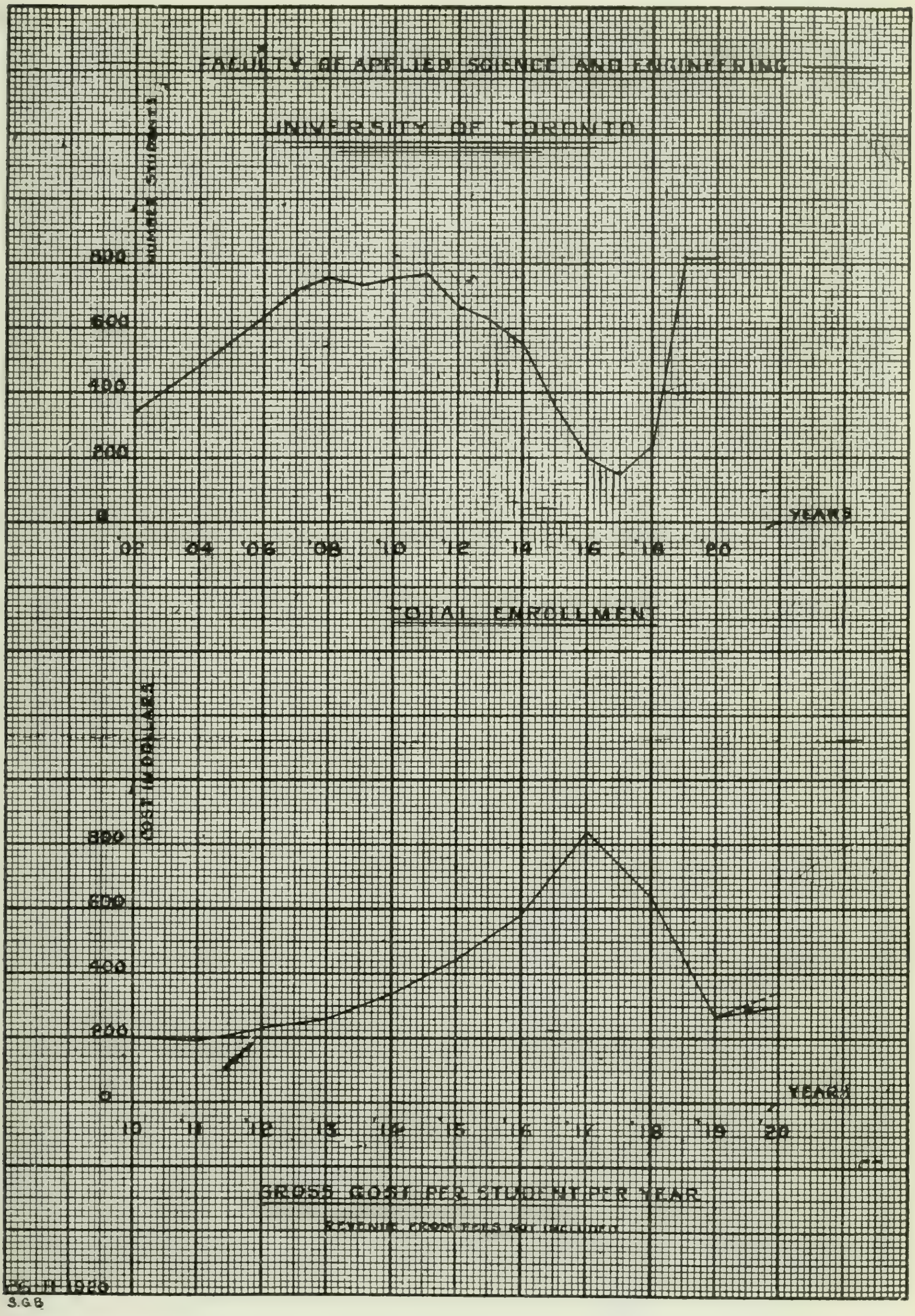
Civil Engineering.
Mining Engineering.
Mechanical Engineering.
Architecture.
Chemical Engineering.
Electrical Engineering.
Metallurgical Engineering.

The courses extend over the standard period of four years and are designed to give the students a thorough knowledge of the scientific principles underlying the practice in the several branches of the profession, and also such training as may make them immediately useful on graduation whether in purely professional work or in those occupations indirectly connected with Engineering in its various branches.

In addition to the instructional work in the several courses the Faculty performs a useful public service in respect to testing and research work to which the members of the staff devote a portion of their time.

Staff of the Faculty.—The staff consists at present of 103 members, of whom 47 are of professor grades. Of this full staff 75 are engaged wholly upon the Engineering portions of instruction and research and are carried and paid from appropriations made to the Faculty as such; the remainder are members of the Arts or Medical Faculties who lecture in various subjects to the students enrolled in the Faculty (*e.g.*, Mathematics, Languages, Geology, Mineralogy, Biology, etc.).

Represented on the staff are graduates not only of this and other Canadian Universities, but several from British and American Universities and many of the senior members are men who have attained distinction in their respective branches of the


FACULTY OF APPLIED SCIENCE AND ENGINEERING
UNIVERSITY OF TORONTO
NUMBER STUDENTS
800
600
400
200
0
YEARS
'02
'04
'06
'08
'10
'12
'14
'16
'18
'20
TOTAL ENROLLMENT
COST IN DOLLARS
800
600
400
200
0
YEARS
'10
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'13
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'15
'16
'17
'18
'19
'20
GROSS COST PER STUDENT PER YEAR
REVENUE FROM FEES NOT INCLUDED
26 II 1920
S.G.B.

profession and as such have brought great credit to this University; their services continue to be sought as consulting engineers and advisers by various interests both public and private.

Buildings and Equipment.—The buildings occupied by the Faculty are six in number —the "Engineering," being the original of the School of Practical Science; the "Chemical and Mining;" the "Mill" (Mining); the "Observatory" (Surveying); the "Mechanical" (Thermodynamics and Hydraulics); and the New Building to house Electricity and Applied Mechanics. In addition the large hall behind Convocation Hall is used for drafting.

In general the names indicate the use to which they are put, but it should be explained that the Engineering Building provides for a large part of the instruction common to all Departments, such as drafting, surveying, engineering, physics, photography, applied mechanics lectures (in part); it also contains the Department of Architecture. The Chemical and Mining Building, in addition to these engineering departments, provides for the Department of Metallurgy and is occupied as well by the Departments of Geology, Mineralogy and Electro-Chemistry of the Arts Faculty, although lectures and laboratory work in these are carried on also in other buildings of the University and at the Museum. The New Building is to provide, when completed, for all the lectures and laboratory work in Electrical Engineering and for a portion of the lectures and laboratory work in Applied Mechanics, including the testing laboratories for structural materials; this building is now only partly occupied, the equipment being in process of transference from the old Engineering Building.

The equipment of these various buildings, while generally very complete, has been increased but little during the past few years, excepting the Aeronautics, added during the war, and the Electrical now being installed in the New Building. In general the equipment of laboratories comprises those of the Thermodynamic and Mechanical, Hydraulic, Aeronautic, Engineering, Physics, Electrical, Chemical, Electro-Chemical, Assaying, Metallurgical, Mining, Milling and Concentrating, Strength of Materials (Structural), Highways, Sanitary (with Ontario Board of Health), Cement, Metrological and Geodetic Observatory, Geological and Mineralogical. There are in addition the special equipments of the Art and Modelling studios in Architecture, the very large equipment of the drafting rooms and the Surveying equipment located and used both at the University and at the Summer Camp.

During the past year use was made for the first time of the Summer Survey Camp at Gelert, in Haliburton, which has recently been established with lands and buildings on Gull Lake to provide more efficient higher instruction in geodetic work and in land, railroad, hydraulic, hydrographic and trigonometric surveying. It is the intention to extend this summer work to Mining, Geology and Mineralogy.

Attendance of Students.—The enrolment of students in this Faculty has steadily increased through the periods of "School" and "Faculty" in University connection until about 1911, when there was a slight dropping off which, followed by the war, brought the number down to a very low figure. On the conclusion of the war the enrolment suddenly increased so that during the past year and the present the total (808 and 807 respectively) has exceeded any former numbers. The yearly enrolment is shown on the attached diagram between the years 1902 and 1920.

An analysis of the attendance indicates a very considerable change in the demand by the country as indicated by the relative enrolment in the several Departments. This is evident from the decrease in students in Civil Engineering and kindred branches and the great increases in Electrical, Mechanical and Chemical indicating a decided swing to-day to the industrial side of Applied Science and Engineering education.

Following are tables of distribution of enrolment for the two critical years of 1910 and 1920, which will indicate the change. (Note that the Department of Analytical Chemistry is being discontinued in this Faculty and is replaced by Chemical Engineering, also that Metallurgical Engineering is new since 1910.)

ENROLMENT OF STUDENTS.

Year 1910-1911

	First Year	Second Year	Third Year	Fourth Year	Total
Civil Engineering	138	85	104	55	382
Mining Engineering	28	14	19	16	77
Mechanical	31	18	66	48	163
Architecture	7	8	5	4	24
Analytical Chemistry	10	5	6	2	23
Chemical Engineering	4	3	2		9
Electrical	56	34	2		92
	274	167	204	125	770

Year 1920-1921

	First Year	Second Year	Third Year	Fourth Year	Total
Civil Engineering	29	58	30	37	154
Mining Engineering	13	25	16	12	66
Mechanical	44	56	33	26	159
Architecture	10	11	3	9	33
Analytical Chemistry				15	15
Chemical Engineering	32	66	38	10	146
Electrical	60	93	40	23	216
Metallurgical	3	9	3	3	18*
	191	318	163	135	807

It is to be observed that the large second year of 318 in 1920 is a result partly of the war and partly of the impetus in Applied Science education; this class as freshmen last year numbered 403. The drop in the enrolment in the First Year to 191 in 1920 is considered to be due to the higher matriculation standard just now applied and a very stringent application of entrance regulations as well as possibly some diminution due to the absorption of returned soldiers.

The Cost, Past and Present.—A review of the cost for administration and work of the Faculty for the past ten years indicates a gradual but slow increase for the few years before the war, then a decline during the four war years to a figure below 1910, and then a sudden rise for last year to a figure 35 per cent. greater than 1910. In considering this fluctuation it is interesting to keep in mind that the number of students enrolled in 1910 and 1920 were almost the same, being 770 and 808 respectively. This range is approximately $140,000 for 1910 up to $160,000 in 1914, down to $125,000 in 1917, and up to $190,000 in 1919. These figures do not include the *pro rata* amounts for salaries of staff carried on the Arts Faculty giving lectures to Applied Science students which rightly, if considered included, would increase these amounts by from about 10 per cent. in the years before the war, reduce to 8 per cent. toward the end of the war and rise to 16 per cent. at the end and since the war. (None of these figures include any *pro rata* amount of the whole University overhead cost chargeable to this Faculty, nor do they take into consideration the cost of Applied Science buildings nor the interest or depreciation thereon.)

Comparing these yearly costs with the number of students annually enrolled in the Faculty as shown on the first diagram, the cost per student per year has been determined as shown on the second diagram herewith. (These costs, as before, do not include University overhead or interest and are gross costs, i.e., do not take into consideration fees paid.) It will be observed that the rate per student gradually rose in the few years before the war until in 1914 it was about $330, and then it rose very rapidly during the war (due mainly to decreasing attendance) until in 1917 it reached $340, and as rapidly fell again until last year it reached about $270, due mainly to the greatly increased attendance. For the current year it is estimated that with the standard salary list, without the bonus, this will increase to about $300, and taking the salary bonus into consideration, as now applied for this year, the rate may reach about $350 (shown dotted on diagram), which, it is to be noted, is an approximation to conditions at the commencement of the war. For comparison, it may also be noted that this rate is lower than those in the larger Engineering Colleges in the United States.

PART II.

The Relation of Faculty to Profession.—As already pointed out the members of the staff participate in the professional work of the country and indeed this is encouraged. The younger members employ their summer holiday periods in Engineering work of various kinds and add not only to their incomes but to their knowledge and experience, and in this manner increase their value to the University. The senior members also give considerable of their time to professional work, and this is encouraged not only during the holidays, but during the session, provided it does not interfere with their work. From this course many advantages accrue to the University, not the least being the broad viewpoint gained and retained through close contact with the activities of the country, and through their high connections as consulting engineers and technical advisers they bring credit and recognition to the University from sources which can be of great assistance to the cause of higher education. For these reasons it is not only desirable to give such opportunities by long summer holidays, etc., but to endeavor to attract to the staff of the Faculty such engineers of standing as will be increasingly recognized by the profession.

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*In addition to these in the regular Metallurgical Engineering there are 26 in Mining and 40 in Chemical Engineering of third and fourth years taking Metallurgy.

The Graduate Body.—The graduates of the Faculty, including those of the School of Practical Science, now aggregate 2,040 and they represent all branches of engineering and technical business not only throughout Canada but in the United States and various parts of the British Empire. It may be of interest to note that of these 1,444 are at present engaged in the Province of Ontario, 78 in Quebec and the Maritime Provinces, 240 in Manitoba, the Western Provinces and British Columbia, and 177 in the United States; 64 are deceased. With regard to the United States it is to be recognized that while many are there permanently, a large proportion will return to Canada as opportunity offers, and bring with them incalculable experience.

The prominent and influential positions held by the graduates and the high quality of engineering work in which many of them are engaged have already brought much credit to this University. So far as the Province of Ontario is concerned, it may be pointed out, for instance, that nearly all the senior members of the technical staff of the Hydro-Electric Power Commission are graduates of this Faculty, and to these may be added the large numbers who are engaged in Engineering work, both technical and administrative, for the Dominion Government, the Provincial Governments, and the many municipal and civic utilities. The alumni are found on Harbour Commissions, Power Commissions, Irrigation schemes and deep water-way projects. In addition to these are the numerous large private technical and business undertakings in which Engineering graduates occupy most important posts.

PART III.

The Requirements of the Country.—Canada, and especially the Province of Ontario, require for the next few years a type of education which will best help the national development in the most direct, substantial and permanent manner. So far as Applied Science and technical education generally are concerned, we realize that its product must be a national asset. The nation's knowledge and dexterity in material things, too, are very determining factors in its prosperity and, if it lacks these, it will not be able to maintain its place; its ability to develop and utilize its natural resources, its aptitude and energy in trade and commerce and its skill in industrial pursuits are the essential elements in these determining factors which in turn depend primarily on scientific education.

The Future of Applied Science.—To fully develop the resources of the country, the resources of the field, forest, mine and river, we must start afresh our study and preliminary planning for those projects contemplated before the war, we must investigate and analyze the newer problems which have arisen in the past few years and must plan for the future on the larger things of the country's development with a wider horizon than ever before.

This means dealing with the great fundamental problems of Transportation, with Mining and its Geological and Mineralogical exploration, with Water Powers and Hydro-Electric development, with Municipal Utilities and problems of health and convenience, with the great basic industries and with the other varied branches of Industry and Manufacture both Mechanical, Electrical and Chemical, which have now entered so much into our national life. It means, too, the awakening of a national style and originality in Architecture, in its combination of Art and Applied Science. And, above all, it means applying and reapplying, through the medium of Research, our scientific knowledge and discoveries, so that we may plan for the work of to-morrow on the results of yesterday.

The Place of the University.—In putting into effect this programme for the country's development the University must play the leading part. It must not follow the trend of events, it must actually lead in the national progress; it must anticipate the country's needs.

The Faculty of Applied Science and Engineering of a National University such as this is, must be prepared to train its students for the national needs not as for to-day but for five and ten years hence. Its policy, therefore, must be laid down with wide vision and with a view to applying the best that is in the country's Human Resources for the development of its Material Resources.

The wide extent of instruction which this involves in its fullest service to the country presents a large problem to the University. It cannot be expected to make engineers of young men in four short years; the fuller process must be carried on in the years after graduation. The University, however, can lay the foundations and educate the student in the practical application of the scientific fundamentals to the various phases of Applied Science as they are known and practised to-day. It is not its function to teach its students the work of artizans, but primarily to educate them to be original thinkers, designers and constructors, and leaders of character in the service of the community. For this they must have as well a broad education, not wholly technical, and must have enough of those general fundamentals by which they can orient their technical education with the economics of the world into which they enter after graduation.

In the short period of four years, each with an academic session of not more than seven months, it is found most difficult to crowd in all the varied instruction that the needs of to-day seem to demand. It must be remembered, however, that the process of absorption proceeds throughout the summer holidays whereby the student is enabled to apply under actual working conditions, the principles he has learned the preceding winter. In this respect the long summer vacation is of value to both student and staff alike. Neither can the student be expected to specialize; indeed it is considered undesirable beyond such general specialization as is involved in the broad divisions into which the profession is divided.

With these conditions surrounding the education of the young engineer the University undertakes to prepare him for his future work whether purely professional or only remotely so. What that future may be he may not clearly foresee even when he graduates, and when the broad field is presented it is quite evident from its diversity that there is room for uncertainty; then it is that the student commences his process of specialization.

The field of the Engineering profession, now expanded to many times its breadth of forty years ago, covers the wide range of a country's activities. These can only be enumerated:

Civil Engineering constitutes by far the largest field in the profession. It may be divided into many sections such as: Transportation Engineering comprising work connected with steam and electric railways, their construction and operation; Public Works Engineering, including waterways, harbours, docks and terminals elevators; Municipal Engineering, which embraces all branches of water supply, drainage, sanitation and the laying out of streets and pavements with their lighting and traffic questions; Hydraulic Engineering, of importance in Canada in the development of the Hydro-Electric Power, in questions of water storage, supply and control, and closely allied with this are Irrigation and Reclamation Engineering. Connected with the foregoing are the branches of surveying and geodesy and the precise work of mapping. Structural Engineering includes the design and erection of steel buildings and allied with it is Bridge Engineering, the building of re-inforced concrete bridges and viaducts. Highway Engineering, while related to both transportation and municipal, is now assuming such proportions that it is considered as a separate branch.

Mining Engineering also covers a large field and might be divided into the processes of mining and the processes of treatment or milling and refining. The laboratory work embraces assaying with its economic features. The processes involved in the working of our iron, coal, gold, silver, copper, nickel, lead and zinc resources alone cover a very large scientific field.

Metallurgical Engineering can be divided into two distinct parts: the first is the production of metal from the ores and the second the working of the metals as produced. To Canada this is most important as affecting the basic industries of iron and steel, fuels and the economic metals.

Mechanical Engineering, which has a scope approaching that of Civil, comprises that work connected with Steam Engineering, Internal Combustion, Aerodynamical Engineering, Heating, Ventilating and Refrigerating Engineering, Manufacturing and Industrial Engineering comprising the basic industries of grain milling, clay products, cements, glass, textiles and the great number of metal industries. Under this might also be included Naval Architecture.

Electrical Engineering is a steadily increasing profession dealing with Electrical Traction and Transportation, the Telegraph, Telephone and Wireless, Illuminating Engineering and the generation, transmission, distribution and application of electric current to the many utilities and industries of the country.

Chemical Engineering has taken a sudden advance into a leading place in the profession. Chemical Engineering fields are now developed in the pulp and paper industry, in the manufacture of oils, soap, sugar, rubber, textiles, soda and other electro-chemical products which now enter into Canadian enterprises.

Architecture, which is closely related to Engineering, embraces, along with its artistic branches, much of Applied Science in its application of building materials and modern building construction as well as Town Planning and Landscape Architecture. The demands and the trend of to-day offer greater opportunities in this direction than heretofore.

PART IV.

Aims of the Faculty.—This Faculty from its early days has attained a unique place in Canada. This has been due to the personnel of the staff and administration, the high character of work and the quality of the graduates. This place must be maintained.

While the number of students enrolled has, apart from the war, almost steadily increased it is believed that the strength of the Faculty lies rather in the quality of its work and its graduates than in the large numbers. This Faculty believes that it is quality and not numbers which makes a University a power in the country.

It is evident, however, that the number of students coming to this Faculty is steadily increasing, and it may be expected to increase for a few years at least, with the technical activities of this country under post-war conditions. It is to be expected that the present numbers of 808 and 807 of enrolments last year and this are in the process of enlargement and that the figure will approach or pass 1,000 next year. This is based upon the view that the present smaller first year represents a temporary check in the increase owing mainly to the greatly increased matriculation requirements through the operation of which many students have been delayed in coming up; those who succeeded in gaining entrance elsewhere probably need not be expected. For future years beyond the immediate post-war period it is difficult to forecast, but with the assured development of the country and the place which this University has acquired in it, it appears that at least 1,000 students must be expected for some time.

But there is a still further consideration. The present day demands are so great for particular instruction in various branches that the Faculty is faced with the constantly increasing difficulty of providing requisite instruction within the four year period. The experience of other Universities is similar and the criticism of to-day is that students are asked to do too much within the time. The complexity and increasing number of subjects in which instruction is sought also complicates this situation, and while not encouraging a multiplicity of subjects as do some Universities, it must be recognized that this University must meet the requirements of the country.

It is not a question yet for consideration whether or how soon a fifth year may be found necessary or expedient. There are already various arguments for it as a postgraduate year for specializing and research work. If it were established as a special year for the latter purpose and not as a compulsory year of the course it is not yet certain that there would be a large attendance and the expense would not be large. If, however, the course itself were made five years in length the attendance would be increased by say, 200 yearly, and this greater number would be the measure of the greater expense which, of course, would be very considerable.

In addition the subject of Research must be kept prominently in mind. The continuance of the efforts of this Faculty in this direction is essential. So essential is it considered that two years ago a special organization was established within the Faculty called the "School of Engineering Research," through the medium of which this most pressing work could more efficiently be carried on. The success of this arrangement has warranted the course taken and while the large number of students has demanded much greater attention to instruction—which is, of course, the first duty of the staff—it is hoped that with this efficient organization much more research of primary and practical value to the country can be accomplished.

The aims of the Faculty must be directed toward the proper instruction and best efficiency in providing for these large numbers. These students must be given the utmost facilities for their education and for education which they and the trend of national activities demand. The Faculty, too, must do its share, and it must be a large share, in Research of that peculiar type which the various branches of Applied Science in these national activities require and which they expect of a national University.

Requirements of Faculty.—The immediate requirements of the Faculty comprise mainly increased personnel of staff and increased equipment for carrying on work.

It is recognized that with the new responsibilities in its relation to the country's requirements the work of the Faculty must be considerably enlarged. It must provide for some new lines of instruction and it must expand and greatly strengthen certain departments.

It is not necessary to point out the essential requirement that a Faculty of this nature must have its Departments so arranged that they are interdependent; the best efficiency demands an interlocking of the work of various groups or Departments. All the branches of Civil Engineering, for instance, are interlocked; mechanical and electrical depend upon each other; Mining, Metallurgy and Chemical Engineering are so connected with each other, and indeed with Electrical and Mechanical that they cannot be dissociated. Architecture and Civil Engineering are yearly becoming more necessary to each other, especially in industrial fields. In a larger way, Metallurgical and Structural Engineering are interlocked with Architecture. Similarly it may be noted that there is and will continue to be an interlocking between certain portions of the Chemical, Mining, Metallurgical and Surveying Departments of this Faculty with those of the Faculty of Arts and Forestry.

To build up and expand any of these Departments means a corresponding strengthening of its complementary ones and in this way effort and expense is repaid in a general consolidation throughout the whole Faculty.

With these objectives it is considered desirable to somewhat reorganize the Civil Engineering to provide for and strengthen branches now being more emphasized; Municipal Engineering, Sanitation, Town Planning, Highway Engineering, Irrigation and Reclamation are amongst these. In what is now called Mechanical Engineering it is desirable to make a more definite branch, possibly a separate Department of Hydraulic Engineering on account of its great importance. It is desirable to consolidate the Mining and Metallurgical Engineering more completely with Chemical and Electro-Chemical Engineering, and especially to expand Metallurgical work on account of its increasing importance to the country. It is necessary to extend the programme now entered upon for the greatly increased facilities of Electrical Engineering. In Architecture, which is also in process of considerable expansion, it is desirable that greater attention be given to the art side and a much broader course followed in design in its various branches.

For the later development of the Faculty the provision of further buildings will be essential. It is not yet apparent how soon or how great this will be. The immediate situation is being relieved by the new Building for Electrical Engineering and Applied Mechanics. It is most necessary, however, that within a year and a half at the latest, arrangements now in contemplation be carried into effect whereby the Chemical and Mining Building can be devoted wholly to those groups within this Faculty; this involves the removal of the Geological and Mineralogical Departments to other quarters.

The provision for the future, where 1,000 or 1,200 students must continually be provided for, is another matter. Whether a fifth year, creating a total probably in excess of 1,200, is added or not, the provision of a new main building to replace the old Engineering ("School") Building must assuredly be considered in any building programme. Apart from the unsuitability of this old building it is now quite evident that with 1,000 students it will be taxed to its utmost and that any new building to replace it must, in view of a possible total attendance of 1,200 or more, be of a size considerably larger.

Under any circumstances it must be kept in mind that laboratories and equipment must be enlarged and maintained and that laboratories of this character are necessarily very expensive. It must be recognized, too, that in the very nature of this work adequate salaries and attractive conditions must be offered for staff appointments whereby engineers eminent in their profession can be secured and, above all, retained.

Financial Requirements.—It is not the purpose herein to represent financial requirements in detail. It has been shown that the present cost per student per year is about $350. This figure is the gross cost without deducting fees paid and is based upon the salaries of the current year (plus the bonus which is being paid), which it is considered should become the fixed salary scale; it also includes the small portion which is provided for under Arts appropriations. With due consideration for the increased personnel and equipment which is required, for the reorganization and strengthening of the various Departments as outlined, it is thought that this should be slightly increased. It is, therefore, considered that for the next five years a student attendance of at least 1,000 should be provided for—with possible increases up to 1,200—and that financial provision should be contemplated on the basis of $380 per student enrolled within the Faculty, of which about $350 would be the net amount required for appropriation direct to this Faculty.

FACULTY OF FORESTRY.

The present instruction in this Faculty should be expanded in the following directions—the establishment of: (1) a practice camp and forest experiment station; (2) post-graduate courses leading to the degree of Master of Forestry; (3) a forest ranger course, and (4) a forest products museum. These are necessary for the full rounding out of forestry education in this Province and there is already sufficient demand to justify the University in its inauguration and financial support of them. The objects to be attained by these four lines of development are set forth in the paragraphs below, together with an appendix showing the probable cost to the University.

It is understood, of course, that the cost items given below represent development and are, therefore, in addition to the usual annual budget of $16,000. No estimates have been made of a new building because it is understood that our requirements in this respect are to be presented in a separate memorandum.

1. *A Permanent Practice Camp and Forest Experiment Station.*—In the past we have been dependent upon the generosity of various lumber companies to furnish camps and working fields for the practical instruction of our students. Each camp has been in a new place and thus the cumulative effect of the students' work in the forest has been lost. This method has proved very expensive in time and money and unsatisfactory from the teaching standpoint. Under an arrangement with the Provincial Forestry Branch the practice camp during the present fall was held in the Timagami Forest Reserve. While as yet no definite announcement can be made with regard to the matter, it is expected that the Provincial Government will soon grant the University a large tract of land to be used as a demonstration forest and practice ground for the students of the Faculty of Forestry. There for six weeks at the beginning of the Third Year and for an equal length of time in the early part of their Fourth Year the men will put into practice as far as possible the things they have learned in their forestry text-books.

In the first place, they usually lay off the boundaries of their practice area and divide it into working sections. The students construct a map showing twenty-five or fifty or one hundred foot contour intervals. This, of course, discloses the topography and drainage and thus indicates where the hauling roads and camps may be conveniently located. The next procedure is to make a forest type map which locates, for example, the pure stands of hardwoods and softwoods and the mixed stands of these species. It also shows the distribution of the barrens, burns, swales, and muskegs, if present. The students then estimate the timber on the tract in terms of board feet or cords for each commercial species.

All these data are placed upon the map of the tract so that one may see clearly the topography and drainage, the location of the logging roads and camps, the nature of the forest types and stands and the amount of material that may be cut in the form of saw logs, pulpwood or cordwood. These are about all the facts with regard to the condition of an area that a lumberman needs for the purpose of logging, but the forester must enter into the condition of the future productiveness of the area, for it is his business to maintain the continuity of the crop. In order to find out the condition of the tract from this standpoint, he must do two things; he must determine the amount of material not yet of merchantable size, and having done this he must determine how fast it is growing, or, in other words, how much wood in board feet or cords will accumulate each year on the average acre. Therefore, in addition to estimating the amount of material now merchantable on the practice area, the forestry students, by means of the data obtained from regeneration and growth study surveys, make estimates of the probable yield at stated intervals in the future. This involves not only a stocktaking of the young growth, but also the determination of the probable death rate as the stands pass from youth to maturity, and this in turn involves, among other things, the making of forest disease surveys.

In order to keep an area continuously productive, provision must be made for the reproduction of the merchantable species at frequent intervals. The natural mortality is very large in a forest and, therefore, there must be an abundance of young trees coming on if the continuity of production is to be preserved. The natural regeneration of the forest is precarious and uncertain and the necessary conditions are not well understood. Yet the study of such conditions forms an interesting and very important part in the formation of plans for an unending supply of pine saw-logs or spruce pulpwood as the case may be.

There is little need of making plans for the future supply of timber on an area if, as is unfortunately the case in some of our best timbered regions, the area has practically no chance of escaping destructive fires. An essential part of the forestry students' work in the practice camp is to work out the details of an adequate system of fire protection. This includes the locating and building of trails and telephone lines.

The work outlined in the preceding paragraphs covers the main things accomplished by forestry students in a practice camp. In the end they have the knowledge and the data necessary for the making of working plans for the tract, plans that extend a long way into the future and if carried out by the owners of the land would result in a supply of saw logs or pulpwood so long as the sun shines and the rain falls, for wood is only solidified sunshine and water with a few mineral salts from the soil thrown in for seasoning. The forester uses his intelligence to direct these processes of nature. Under a let-alone, do-nothing policy there is no direction and there will be no future supply—at least sufficient to meet the present demands on the present commercially valuable species.

As indicated above, the present methods of logging do not as a rule result in the continuance of a forest of the same nature as that removed. In fact, the result is usually a forest of much inferior quality from a commercial standpoint. That this is the case on burned areas is fairly well known, but it is not generally realized that the same condition holds for logged-over areas that have not been burned. Therefore, if we would maintain the productivity of our forests in pine and spruce especially, we must not only check the ravages of fire, but we must also, in some way, modify our logging methods so as to insure the natural regeneration of pine and spruce. How this can be done in Canada with Canadian species is not yet known and it can be discovered only by experimenting with different methods of cutting, keeping an accurate record of the conditions before and after the operations and measuring the results in terms of the reproduction and growth of the commercial species. The Provincial Government is much interested in such experimental cutting and logging methods, and it is expected that they will be made under the direction of the Provincial Forester and the staff of the Faculty of Forestry on the tract granted the University.

2. *Graduate Courses in Forestry.*—Within the past year we have had six applications for post-graduate work. The applicants are already engaged in research work in some aspect of forestry or allied subjects and wish to prepare themselves better for carrying on their investigations by taking additional work at the University. It has been necessary to turn these men away because at present there are no courses in the University to meet their particular needs.

To meet this demand and to offer to any forestry graduate an opportunity to specialize in any aspect of his profession it is desired to establish graduate courses leading to a Master's degree in Forestry. The number and nature of the courses will depend upon the demand. At present, for example, there should be graduate courses for specialized training in forest tree diseases. A few years ago, the Commission of Conservation wished to engage a specialist to study the balsam heart rot, and it had to go to the United States to get him because there was no available man in Canada with the required training. The Entomological Branch imported a man from the United States to study the spruce budworm, again because we did not have any one with the proper training for the work. The spruce budworm has already killed enormous quantities of pulpwood producing trees in the Maritime Provinces. The toll of fungus diseases in the forest is enormous each year. With growing scarcity and increased cost of timber more attention should and will be given to forest tree diseases. We should train men in our own country for that kind of work and they should have a forestry course for a foundation.

One of the applicants referred to above is making a special study of balsam and another of spruce in relation to the reproduction and growth after logging operations and after fires. Still another is studying the distribution and timber yield of the forests of a province in relation to climatic and soil conditions. They wish to take special courses in methods of field research, silvics, forest ecology and forest geography. We never will know how successfully to modify a forest to meet the needs of man until we better understand how nature makes a forest, and we do not yet know how nature regenerates a pine forest after it has been burned or a spruce forest after logging. Such knowledge is fundamental and can be discovered only by painstaking investigation. The Faculty of Forestry wishes to encourage forest research of this kind by offering courses to prepare men for it.

An increasing number of our graduates are entering the employment of lumber companies, and pulp and paper companies. Some of them have asked for advanced courses in logging, engineering, and wood chemistry. It is for the best interests of forestry to encourage such men to prepare themselves for positions of increased responsibility in large private companies.

The giving of graduate courses will necessitate an increase in the teaching staff. Naturally, such courses should be given by the senior members but they are already overloaded with work.

3. *A Forest Ranger Course.*—Scarcely a week passes that we do not receive an inquiry about a short course in forest surveying, timber estimating, log scaling, the grading of lumber or forest planting from men experienced in work of some kind, but who cannot meet the matriculation requirements or are excluded from a full course in forestry by financial considerations. A dozen or more men in Eastern Canada every year go to forest ranger schools in the United States because they cannot get that type of instruction here. This state of affairs ought not to exist. Such men should be encouraged by the educational institutions of their own country to improve their condition and to make themselves more useful to their employers.

A ranger course would doubtless be very acceptable to the Provincial Government as part of their plans for the improvement of the administration of the timber limits. The instruction in such a course should be given entirely in the forest. The practice tract, if granted us, would furnish the working field and the practice camp most of the equipment needed. If it were considered desirable to give a six or eight weeks' course each year to a limited number, say, 25 or 30, of the more intelligent and progressive fire rangers and timber scalers, the term would have to fall in the period of the year when their duties in the forest were the least urgent. This would doubtless be in late fall or early spring. They would be on duty in August and September when the practice work for the forestry students is given, and during the best time for the rangers the teaching staff of the forestry school would be on duty in Toronto. So it would probably not be feasible to give the ranger course and the practice camp instruction of the forestry school at the same time. Therefore, another member of the staff would need to be provided to take charge of the ranger course, and when not thus engaged he could give courses to the students at Toronto.

4. *A Forest Products Museum.*—The teaching in tree identification, wood identification, timber physics, and forest utilization is seriously handicapped from lack of illustrative material. More of such material, however, is on hand and in use than can be properly displayed because of lack of space in the old Botany and Forestry Building. A full exhibit illustrating the uses to which Canadian woods are applied in industry is necessary for the proper presentation of a course in forestry. It is possible that such an exhibit might be developed in the Royal Ontario Museum and thus serve the public as well as the forestry students. It is not generally understood by the public that the forests of Ontario have yielded revenues to the provincial treasury since Confederation four times greater than the revenues from the mines during the same period —and the mines, when they are once exploited, cease to be producers, while the forests, when properly treated, are restorable, and their productiveness goes on and on. The importance of the forests in serving the timber-using industries of the Province would justify the expenditure of considerable sums in a forest products museum.

ESTIMATE FOR THE DEVELOPMENT OF THE FACULTY OF FORESTRY.

I. (1) New Building	....
(2) Practice Camp and Demonstration Forest	$10,000
(3) Equipment for Teaching	3,000
	$13,000
II. Additional Staff	$7,000
III. Maintenance and Apparatus	6,000
	$13,000

It is probable that the Provincial Government would construct the buildings for the practice camp.

SCIENTIFIC RESEARCH.

SUMMARY.

Development of Research in other Countries.

Industrial Development depends upon advances in Pure Science.

Universities rather than Special Institutes must train scientists and deal with fundamental aspects of Scientific Research.

It is special duty of University to select men who show aptitude for scientific investigation, *i.e.*, it should have a well equipped graduate school. For lack of this Canada has hitherto lost many of her most promising men.

This involves library, laboratories, and instructors who have proven themselves investigators. These investigators have enthusiasm and attract the undergraduate into graduate work.

Expense of Graduate School proportionately greater than undergraduate.

Attempt to divide graduate work among several universities unsatisfactory. In a large group men stimulate one another. Concentration in Provincial University should not be interfered with. Toronto has good Libraries—University, Royal Canadian Institute and Academy of Medicine. Work of a high order is already being carried on in University Laboratories, but great development is necessary.

Graduate Students number 150. Good nucleus for Graduate School.

There is a flourishing Research Club. Lists of Research Publications in the Annual Reports of the President, also Series of University of Toronto Studies. The Bulletin of School of Engineering Research and the Canadian Historical Review.

The demands of undergraduate instruction on the staff are too heavy. Additional staff needed to free senior men from routine work.

In the past in the face of serious difficulties arising from insufficient equipment and numerically inadequate staff the University has with some success carrried on research, but as the special ward of the State it must be enabled to fulfil in greater measure the services the State has a right to expect from it.

MEMORANDUM ON SCIENTIFIC RESEARCH.

The experiences of the Great War and after have rendered unnecessary any extensive advocacy of the value of scientific research. It was her encouragement of scientific research that was largely responsible for the remarkable development of Germany's power during the years preceding the war; it was the application of the results of scientific research that contributed largely to the successful conduct of the war; and in the present period of reconstruction, research in all fields of science is being demanded as never before.

For the organization and development of scientific activities the British Government has established a Commission on Scientific and Industrial Research and has included in its budget for the current year an appropriation for scientific investigation amounting to $208,000 (as compared with approximately $114,000 for the preceding year), and a further appropriation for scientific and industrial research of over $500,000 (as compared with $243,000 for the preceding year). The United States has a National Research Council for which a permanent home in Washington is now assured. France, in addition to the Department of Scientific, Industrial and Agricultural Research and Inventions attached to the Ministry of Public Instruction, is organizing an Institute of Theoretic and Applied Optics, with a view to building up a great optical industry in the Republic. Italy, giving special attention to the development of industrial scientific research, has already established five Institutions for the scientific investigation of problems connected with as many special industries and is planning for three more similar institutions. And Japan has established an Institution of Physical and Chemical Research with an endowment of approximately $5,000,000.

Such items are a sufficient indication of the rapidly increasing appreciation of the value of scientific investigation to the State. Popular interest is naturally chiefly concerned with the application of the results of scientific investigation to the solution of industrial problems. But it must not be forgotten that the application of science to any industrial problem rests and must rest upon knowledge of the fundamental scientific principles involved. It is obvious that for the successful application of scientific principles to the solution of industrial problems a body of men, thoroughly trained in the principles of the various sciences, is necessary, and if progress is to be looked for, it is essential that there should also be a body of men devoting themselves to original research in all branches of science. It is to the Universities that the State must look for the supply of these two needs. It may be that special institutes can be established for the intensive and continuous prosecution of researches having industrial bearings in their intermediate and later stages, but the foundations for the successful development of such institutes must be laid in the Universities. Whether it be in pure Science, Engineering, Agriculture, Forestry, Domestic Science or Medicine, the Provincial University already possesses investigators and co-workers in training, who by their attainments and environment are better fitted and better situated for dealing with the fundamental aspects of scientific research.

The need of adequate facilities for undergraduate instruction in the various sciences is so evident as to require no discussion here. In this Age of Science a knowledge of the fundamental principles of at least one science, and, more especially, a familiarity with the methods of science should be a part of the intellectual equipment of every University graduate. But such training as may be afforded in undergraduate courses must be planned primarily for laying a broad foundation of general culture and must, therefore, be insufficient in the majority of cases, for the proper equipment of men for scientific research. Scientific investigation has become so specialized and at the same time so complex, that it is only men of special training and with special aptitude for the work who will be successful as investigators. It is the duty, therefore, of the University, as distinguished from the College, indeed, it is the most important duty of the University, to select the men who show special aptitude for scientific investigation and to give them the training that will fit them for successful careers in any branch of scientific work.

In other words an essential part of the organization of the University should be an adequately manned and equipped Graduate School. In the past it was the custom for Canadian students desiring post-graduate instruction to go abroad that they might profit by the opportunities for advanced instruction offered by the Universities of Great Britain, Germany or especially the United States, no adequate provision for such instruction being furnished in their home Universities. As a natural result many of the most promising of these young men remained abroad, giving their best to the country of their adoption, to Canada's loss. How great this loss has been cannot be calculated, but it is manifestly a serious detriment to the State when it is deprived of the services of its most promising sons. The Provincial University should be in a position to offer advanced instruction in all departments at least equal to that to be obtained abroad, so that none of its alumni should feel obliged to go elsewhere for any special training that may be desired.

What does this mean? It means a library or libraries in which the student may have access to all the important literature bearing upon his particular topic of study. It means laboratories with ample space for graduate work and fully equipped with all needful apparatus. But above all it means the services of instructors, themselves proven investigators, sufficiently free from the routine of undergraduate teaching to give adequate attention to advanced students.

This is a programme of some magnitude but one that must be carried out if the Province is to keep pace with present-day educational requirements. When the Johns Hopkins University, on its opening in 1876, made graduate work its chief concern a new ideal was established for the Universities of the United States and it was not long before other leading institutions took steps to realize that ideal, with the result that now all the greater American Universities have well organized and well equipped Graduate Schools, in many cases with teachers upon their staffs who devote their entire time to research and to their graduate students who are being trained to become independent research workers. The experiences of the war have given a powerful stimulus to the development of such schools and of the type of work they encourage, and now more than ever before the American Universities are offering facilities for research and graduate work which cannot fail to attract earnest and capable students. Nor is the movement confined to the United States. Since the war, too, several of the British Universities—Edinburgh, London, Dublin—have announced the establishment of Graduate Faculties and are endeavouring to attract students to their graduate courses. Their conservatism has yielded to the demand for men with the advanced training which only an adequate course of graduate instruction can give. It is evident that unless the Provincial University can offer courses of graduate instruction equally attractive with those available in the better Universities of the United States the Province and Canada, as a whole, will continue to lose the services of some of her most promising young men. Nor should the pedagogic value of research work by instructors engaged chiefly in undergraduate teaching be forgotten. It raises the status and authority of the instructor in the eyes of his students, it enables him to bring fresh enthusiasm to his work; and, above all, it stimulates him to be on the look-out for promising students who may be trained to enter the research field. It is from among undergraduates that the research workers of the future will be recruited.

A Graduate School adequately equipped and efficiently staffed calls for an expenditure proportionately much greater than that required for undergraduate work, and the development of more than one such school in this Province, would, at present, entail an unreasonable strain upon its financial resources, unreasonable because this would result in an unnecessary duplication of an expensive staff and equipment. Nor would an attempt to divide the graduate work among several Universities prove satisfactory, since this also would involve a certain amount of duplication and would prevent the collaborative work, which, under modern conditions, is essential in scientific research. The frequent meeting of investigators in the more or less closely allied fields of science for the discussion of problems and for the comparison and criticism of results, is a most important factor in research endeavour. The segregation of workers in different localities must necessarily interfere with effective team work.

It is not intended to suggest that research should not be undertaken in Colleges that are not a part of a University having a fully equipped graduate school. Far from it; such independent investigation should be encouraged and supported. Its pedagogic value has already been indicated and the State cannot err in supporting serious and promising research wherever it may be effectively carried on. But this support may be afforded by special individual grants and should in no way interfere with the more extensive development of a Graduate School in the Provincial University. Under the existing conditions as regards population and resources in the Province concentration of effort in one good school is essential and where could that concentration be made with greater propriety than in connection with the Provincial University, especially when in that University there already exists a foundation upon which such a school may readily be built up?

The University of Toronto already possesses a Library of considerably over 150,000 volumes, together with some 50,000 pamphlets, and there are in addition and readily accessible the valuable library of the Royal Canadian Institute, rich in technical periodicals, and that of the Academy of Medicine. A relatively modest increase of the Library appropriation would place the University Library in a position to supply the ordinary demands that may be made upon it in connection with research work.

The Laboratories of the University of Toronto which, not very many years ago, were thought to be ample, now, owing to the increased demands for space for both undergraduate and research work, more especially the latter, are in need of enlargement; and in some departments, indeed, the need for new buildings adapted to modern conditions is urgent, if these departments are to meet the demands that are being made upon them and are to afford facilities equal to those of the Universities of other lands. But in her existing laboratories the University has assets whose value must not be neglected. Work of a high order is being carried on in them, often under great disadvantages, and a concentration of effort upon their extension and equipment, to bring them fully up to present-day requirements would, manifestly, most effectively meet the continually growing demands for higher education and investigation in the Province. If the Provincial University is to fulfil its obligations to the Province and the Dominion, as a whole, it must have an equipment in laboratories and apparatus second to none. In recognition of the demand for advanced courses of instruction, and to encourage and organize graduate study in the University, the Board of Governors in 1909 established a Board of Graduate Studies whose duties were the organization and supervision of graduate instruction and the formulation of requirements for higher degrees (M.A., Ph.D., M.D.). Under the auspices of this Board the number of students pursuing graduate courses in the University rapidly rose until in 1917-18 they numbered 93 and in the current year, when registration is complete, will fall but little, if any, short of 150. In its Board of Graduate Studies the University of Toronto has been the nucleus from which a successful Graduate School may readily be developed. The University has shown an active interest in the development of advanced courses and research, and if certain disabilities that now hamper such work be removed there is ample reason to believe that the University of Toronto will be able to hold its place in the movement towards the development of research that forms so marked a feature in modern education.

The needs of the Library and the Laboratories in this connection have been briefly mentioned, but attention must be especially directed towards the difficulties encountered by the members of the staff who endeavour to carry on research and graduate work. The University of Toronto has always had upon her staff men who were interested in the advancement of knowledge in their particular branch of study, but in the earlier days research work was a matter of individual predilection. To-day conditions have changed; the University staff has been recruited by men who, for the most part, have been trained in an atmosphere of research and feel that the conduct of research work is an important part of their duty. Indeed, many have entered academic life because that seemed to offer the greatest opportunities for pursuing a career in investigation. In the olden days the investigator was more or less isolated, he worked alone; to-day he is surrounded by men pursuing similar aims and with similar enthusiasms. So much is that the case that a flourishing Research Club now exists in the University, whereby members of the staff and graduate workers have opportunities for learning what is being done in other lines of research, thus gaining new viewpoints and suggestions of new methods of attack for their own problems. How extensive the productivity of the University in research has been in recent years may be seen in the lists of publications by members of the staff that have formed part of the President's Report for several years past and in the various publications maintained by the University, such as the *University of Toronto Studies, The Bulletin of the School of Engineering Research* and *The Canadian Historical Review.* A statement of the problems now being investigated will be found in Appendix A of this Report.

But research work can be carried on successfully only if the worker can be assured of sufficient leisure from other duties to devote himself exclusively to his problem during definite periods of his time. To the majority of the members of the staff this leisure is lacking. The demands of undergraduate instruction, participation in the work of numerous committees and executive work connected with the supervision of a large department leave little time for the prosecution of research, and in several departments the instruction of graduate students can be carried on only by the sacrifice of time that would otherwise be devoted to research. The University is under-staffed even for the undergraduate work that is demanded of it and as a result graduate work and research suffer. Additional assistants are necessary all along the line that the senior men may be freed from much of the routine work now required of them; indeed, the time has now arrived when senior men who have shown their ability to successfully carry on research work should be enabled to devote all their energies to that work and to the instruction and guidance of graduate students.

The growing demand for fundamental research in all branches of knowledge, and the increasing need for men competent to direct the application of scientific principles to the development of the abundant resources of the Province, are yearly placing additional obligations upon the Provincial University. As the capstone of our educational system it must not only furnish opportunity in its undergraduate courses for a broad and thorough foundation in all departments of knowledge, but it should do its share both by precept and example in adding to the store of knowledge, and it should be in a position to give adequate special training to those graduates who show special aptitude for scientific research. It has endeavoured in the past, with some success, to fulfil these obligations, even in the face of serious difficulties arising from insufficient equipment and especially from a numerically inadequate staff. The Provincial University is the special ward of the State and it is to the State that it must look for the support necessary for the fulfilment of the services the State has a right to expect from it.

APPENDIX A.

Statement of the problems now being investigated in the Laboratories of the University of Toronto.

The following is a statement of the various researches now being carried on in the Laboratories of the University of Toronto, the statement being collated from reports made by the Heads of the various Scientific Departments.

FACULTY OF ARTS.

Department of Geology.

Dean Coleman.—*Glaciation and Glacial Deposits in British Columbia.* This is part of a study of glaciation and glacial deposits in Canada. It has important economic bearings on the character of soils and on the occurrence of sand and gravel beds.

Professor Parks—1. *The great Fossil Reptiles of Alberta.* A continuation of studies that have been in progress for some years, and have an interesting bearing on the doctrine of evolution.

2. (With students) *Studies of the Fossil Representatives of certain Invertebrate Types occurring in the Toronto District.* Part of a revision of the Geology and Palaeontology of the District, having bearings upon its stratigraphical relations and its geological history.

Professor MacLean.—1. *A Study of Colloidal Clays.* This study bears on the utilization of such clays in the manufacture of brick and porcelain and also considers their relations to landslips and subsidence under heavy loads and in railway cuttings and embankments.

Department of Mineralogy.

Professor T. L. Waker—1. *Ores from Cobalt and Boston Creek, Ont.* The identification of associated minerals from these localities with a consideration of the origin and relationships of these materials.

2. *Felspar from Penticton, B.C.* A study of an unusual variety of crystal types of this mineral, which may throw light on the conditions of their formation and those affecting crystallization in igneous magmas.

Professor Parsons—1. *Calcite from Shangoinah Island, Lake Superior.* A study of the type of crystallization of this mineral associated with definite stages of ore deposit.

2. (With Mr. Thomson) *Silver Ores from Silver Inlet, Lake Superior.* The application of new methods to the determination of the constituents of mixed ores. The study may throw light upon the genesis of ore deposits.

Department of Mathematics.

Professor Fields—*A Basis for the Theory of the Algebraic Ideals.* In this study a new foundation is laid for the study of an extended territory in the theory of the algebraic numbers. New results have been obtained and new lines of investigation are suggested.

Professor Beatty—*Algebraic Theory of Algebraic Functions.*

Department of Chemistry.

Professor Lash Miller—1. (With students) *Physico-chemical Studies of the Growth and Death of Micro-organisms.* An application of physico-chemical methods to the study of the conditions determining the growth of yeast cells.

2. (With Professor Burt-Gerrans and students) *On Concentration Changes at the Electrode during Electrolysis.* The experimental testing out of the mathematical theory of the rates at which these changes should take place. It is a continuation of work previously carried out, the results of which have been published in part.

Professor Allan (and students)—*A New Synthetic Method arising out of the Friedel-Crafts Reaction.* This reaction has been found to yield under varying conditions varying amounts of phythalides; these conditions have been determined and thereby a new method has been obtained for the production of phythalides and, incidentally, other organic compounds. This method is being applied.

Professor Kenrick (with students)—1. *The Scattering of Light by Dust-free Liquids.* The study involves the preparation of dust-free liquids and the determination of the extent of the scattering and polarization of light passing through them under varying conditions of temperature, etc.

2. *The Superheating of Liquids.* A determination of the conditions under which the heating of liquids above their ordinary boiling points without ebullition may occur.

3. *The Vapours of Liquids containing two Volatile Components.* The determination of the composition and pressures of the vapours of such liquids by new apparatus devised for the purpose. The study is of importance from the standpoint of chemical thermodynamics.

4. *Solubility and Crystal-habit.* A study of the relative solubility of the different faces of a crystal which may throw light on the question of crystal formation.

Professor Ferguson (with students)—1. *The Reaction between Iron, Hydrogen and Steam at High Temperatures.* A study of the composition and chemical nature of the various oxides of Iron, which may have bearings on the smelting of iron ores, on the development of rust-proof coatings and on the preparation of Hydrogen by the action of iron on steam.

2. *The Permeability of Silica-glass to Hydrogen.* A study of the occurrence of such permeability at high temperatures, to be followed, if the phenomenon is confirmed, by a study of its nature, whether it is mechanical or chemical. Of importance in connection with the construction of Hydrogen containers and also of great theoretical interest.

3. *The State of Combination of the Water of Hydration in Minerals.* Apparatus is being devised to determine this question in the cases of a hydrated zinc phosphate and other minerals. The study bears upon the conditions under which mineral deposits have been formed.

Professor Burt-Gerrans (with students)—1. *The Regulation of the Current in Electric Furnace Arcs.* A continuation of observations on direct current arcs made by a new device; it is intended to extend the observations to alternating currents. The observations bear upon the proper regulation of the currents for the greatest efficiency of such arcs.

2. *Various Problems in Electro-chemistry,* such as the recovery of precious metals from the anode deposits of a nickel refinery; the electrolytic preparation of iodoform; the effects of modifications of the composition of the paste used in "forming" storage-battery plates; the standardization of the chemical treatment of separators for storage-battery plates.

Professor Rogers (with students)—*Various Problems in Analytical Chemistry,* such as the devising of satisfactory methods for the determination of the copper content of white metals and babbits; for the rapid and accurate estimation in metallurgical processes; of the nitrate content of Chili nitre; and of zinc in the tailings from concentrators.

Department of Physics.

Professor McLennan (with students)—1. *Various Problems in Spectroscopy,* such as the carrying of the series spectra of various elements into the extreme ultraviolet portion of the spectrum; the identification of the series spectra of Lead, Tin and Thallium; the relation between the series spectrum of Mercury and the configuration of the electron systems in its atoms; the determination of the frequency differences of the doublet lines of Hydrogen. All these problems bear on the question of the constitution of the atoms of the elements.

2. *On the Production of Nascent Hydrogen by the Action of Light from an Electric Arc in Helium on a Stream of Hydrogen Gas.* The object of the study is to determine the value of light waves of short length as a catalytic agent.

3. *On the Disintegration of the Atoms of Oxygen by Cathode and Gamma Rays from Radium.* The object of this study is to obtain a basis for the development of a method for tapping the stores of energy known to be stored up in the atoms of the elements.

4. *A Study of the Magnetic properties of the Heusler Alloys and of varying mixtures of their constituents (aluminium, manganese and copper).* The results should have a direct bearing on the solution of the general problems of ferromagnetism.

5. *A Study of the Pressures generated by explosions of mixtures and various gases with air and with each other, including mixtures of the various constituents of paraffin oils with air.* A continuation of work begun last year and involving an inquiry as to whether paraffin oils may be conserved by the use of the products of their fractional distillation.

6. *The Electric and Thermal Properties of Fused Mixtures of Mica and Copper and other Elements.* A continuation of work begun last year.

7. (With Mr. Dobson, Director of the Ontario Hydro-Electric Laboratory, Toronto). *The Behaviour of Helium-filled Incandescent Lamps and of Helium-enclosed Arc Lamps.* To determine if Helium can with advantage be employed in the construction of illuminating agents.

8. *The Liquefaction of Helium.* If this can be accomplished it will furnish a means of obtaining temperatures approaching the absolute zero and so yield opportunity for studying the properties of materials at extremely low temperatures.

Professor Burton (with students)—*Various Problems connected with the Physical Properties of Colloids*, such as the coagulation of colloids by electrolytes; the laws of concentration of colloidal particles in suspension; and the determination of the absolute mass of colloidal particles and of the electric charge borne by them. A thorough knowledge of the physical properties of colloids will contribute to the solution of many physiological problems as well as of problems connected with such industries as tanning, rubber making, ceramics, etc.

Professor Gilchrist (with Miss McCullough)—1. *A Study of the Relation of the Intensity and Duration of an Electric Stimulus to the Effect produced by it in Muscle Contraction.* An attempt to obtain a basis for the standardization of electric currents employed for therapeutic purposes.

2. *An Experimental Testing of the Mathematical Theory of Radiation.*

3. *A Study of the Width of the X-ray Spectrum Lines and the Effect of the Temperature of the Target on the Lines.*

Professor Satterly—1. *The Advance of the Ripple which appears in front of an Ascending Column of Liquid.* A study of the formation and advance of the ripple in relation to the velocity and nature of the liquid, the diameter and nature of the tube, etc. The work may have application to the flotation process of ore separation.

2. *Determinations of Radio-activity in Samples of Minerals, Rocks and Water, brought from time to time to the Laboratory.*

Professor McTaggart—*A Study of the Electric Effects at the Surface of Aqueous Solutions in contact with Air or any Gas.* The work has a bearing on such questions as the purification of a water supply, the production of stable suspension in liquids, the action of mordants in dyeing, etc.

Department of Astronomy.

Professor Chant—1. *The Measurement of the Radial Velocities of Stars from Photographs taken with the Objective Prism.* The use of a prism placed over the objective of a telescope enables spectrograms of a number of stars to be taken simultaneously and quickly. Measurements of these plates give information as to the velocity with which a star is approaching or receding from the Sun.

2. *A Study of the Relation between the Velocity of Light in an Electrolyte and a Current traversing it.* The investigation bears directly on the fundamental nature of light and of the electric current. It has been on hand for some time, but its progress has been hindered by other duties.

Department of Biology.

Professor Bensley—*A Research Index of Literature on the Comparative Anatomy of the Rabbit and the Wild Leporidae.*

Professor E. M. Walker—1. *The Anatomy and Development of a recently discovered insect, Grylloblatta campodei formis, which represents a new order.* It is of special interest as being one of the most primitive of living insects.

2. *A Monograph of the Somatochlora group of Dragonflies*, a dominant group in Northern Canada.

3. *A Study of certain Flies, whose larvae sometimes occur in human subcutaneous tissues.*

Professor Piersol—*An embryological study of the aberrant Salamander Plethodon erythronotus.* A study of the development of a salamander with terrestrial ova.

Professor Huntsman—1. *The Faunal Characteristics of the Bay of Fundy.* The fauna of the Bay is being studied in relation to the peculiar conditions presented by its waters.

2. (With Mr. Leim)—*The Life History of the Shad.*

3. (With Mr. Leim)—*A Systematic Study of the Decapod Crustacea of the Bay of Fundy.*

4. (With Miss Chant)—*The Life History of the Smelt.*

All these studies have important bearings on fishery problems.

Professor Clemens—1. *Investigation of the Life History and Growth of the Herring in Lake Erie.*

2. *A Study of the Food of the Trout.*

3. *The Rate of Growth of Pickerel.*

4. *A Study of Classification and Distribution of Mayflies.*

These are all studies having a bearing upon problems connected with our Canadian fresh-water fisheries.

Professor Coventry—*Studies on the Experimental Modifications of Growth.* A study on the growth interrelations of organs and the effects of disturbances of these.

Dr. MacArthur—*Experiments on the Inheritance of Sex Dimorphism.* A study of the inheritance of certain structural characters in fishes; has bearings on the principles of animal breeding.

Dr. Baillie—*A Study of the Variation of the Composition of the Blood of the Rabbit in connection with Transplantation Operations.* This study is expected to throw light on the interaction of organs.

Dr. Craigie—*A Study of the Relative Vascularity of the Brain Cortex in the Rat.* This study bears on the question of the relation of the blood supply to functional activity in the brain.

Department of Botany.

Professor Faull.—1. *Studies on the Life Histories of certain Fungi.* Mainly of purely scientific interest forming a contribution to the fundamental understanding of the fungi.

2. *An Investigation of the Needle Blight of White Pine.* This investigation has been in progress during the last three years and has revealed the cause of the disease, its main course and the age of the timber most susceptible. It has an immediate bearing on the steps to be taken to combat the disease, of which serious outbreaks have occurred in the forested areas of Ontario.

3. *The Polyporaceae of Ontario*—A monographic study of a group of fungi, having important relations to timber diseases.

4. *Studies of the Diseases of Canadian Timber Trees.* Data have been accumulated especially in regard to diseases of pines, balsams and other coniferous species.

5. (With Mr. A. B. Jackson)—*The strains of Wheat Rust in Ontario.* It has been shown that different strains of rust occur and that wheats immune to one strain may be seriously affected by another. The object is to determine what strains occur in Ontario.

6. (With A. B. Jackson and H. D. Brown)—*Studies on Fusarium.* Studies of species of fungi that attack cucumbers and asters. The purely scientific side of the problem is engaging attention at present, but it is hoped later that the question of resistance may be taken up.

7. (With E. H. Moss)—1. *Life History Studies on Coprinus.* The object of these studies is to throw light from the development standpoint on the classification and relationship of the gilled fungi.

8. *Studies on Crown Gall and Canker of the Maple and Poplar.* These diseases produce malformations of our timber and ornamental trees and the studies are being made with a view to determine the causes of these malformations and the mode in which they are transmitted.

9. (With A. R. Walker)—*A Study of Keithia thujina.* A study of a fungus which affects cedar saplings with a view to the determination of its systematic position, its life-history, its mode of infection and virulence.

10. (With Miss M. E. Currie)—*Studies on the Slime Molds.* A systematic study of the Slime Molds was completed last year and Miss Currie is now extending her studies to their physiological behaviour, especially their nutrition and their parasitism.

11. (With Miss C. W. Fritz)—*A Study of the Cultural Diagnostic Characters of certain Timber-destroying Fungi.* The identification of the fungi that are the cause of heart-rot in trees is beset with difficulties and this study is an endeavour to discover specific diagnostic features for them by applying to them the cultural methods made use of in the study of micro-organisms. This research is a continuation of work begun last year.

Mr. G. H. Duff—1. *Studies of Life Histories in the Geoglossaceae.* These studies have revealed such an extensive and close parallel in the developmental histories of these fungi to those seen in lichens that an essentially new theory of general relationship between the two groups can now be formulated.

2. *Investigations on the Fundamental Phenomena of Growth.* A technique is being devised which will permit of accurate analysis of the growth phenomena of plants with particular relation to their chemical and time relations. It is expected that the results will be of interest in connection with a recent theory of the chemical constitution of protoplasm.

Professor R. B. Thompson (with assistants)—1. *Studies on the Development and Distribution of Resin Canals in the Conifers.* These are studies on the preservative tissues of cone-bearing plants.

2. (With Assistants)—*Studies on the Minute Structure of Woody Conducting Tissues.* Important in their relation to timber physics, wood identification and wood preservation.

3. (With Miss Haining)—*A Study of the Reproductive Processes in Local Calkin-bearing Plants.* Has bearing upon the inter-relationship and classification of the lower seed-bearing plants.

4. (With Miss Pelluet)—*A Comparative Study of Fossil Canadian Representatives of the Lower Vascular Seed Plants.* Such studies are necessary to complete the work that is being carried on with recent forms.

5. (With Assistants)—*Studies in Plant Breeding.* These studies bear on the question of heredity in plants and on the principles underlying plant improvement.

Mr. H. B. Sifton—1. *A Study of the Structure and Effects of Poisonous Weed Seeds.* The object of the study is to obtain data for the correct identification of the poisonous weed seeds named in The Feeding Stuffs Act of 1920, and also to determine the action of the various seeds. The latter part of the work is being carried on in co-operation with the Department of Pharmacology.

2. *The Seed Coats and Embryo Characteristics in connection with Delayed Germination.* A study in the physiology of seed Germination.

Department of Psychology.

Professor Bott—1. *Measurement of the Speed of Simplex Movements of the Upper Extremity by Opposed Muscle Groups.* This study has a direct application to the problems of movement efficiency in industries.

2. *Measurement of the Illusion of Parallel Lines in Visual Perception.* Has a bearing upon the laws of perspective.

3. (With the members of the staff)—*An Application of Group Intelligence Tests to 500 Arts Students of the First and Second Years.* The results of the tests will be compared with the ranking of the students according to their final standing for the year's work and may indicate a method for supplementing the examination method of promoting and admitting students, especially in doubtful cases.

FACULTY OF MEDICINE.

Department of Anatomy.

Professor McMurrich—1. *The ultimate embryonic origin of the tissues of the Vertebrate Fore-limb.* A study begun several years ago but interrupted by other duties. It promises to throw light on certain obscure problems in the morphology of the vertebrate limb as well as on other more general problems of Vertebrate Morphology.

2. *The Anatomical Work of Leonardo da Vinci in its relation to the Scientific Rennaissance of the fifteenth and sixteenth centuries.* A study of the history of Anatomy.

3. (With Dr. Herbert B. Wilson)—*The Arrangement and Plan of the Terminal Branches of the Respiratory Bronchi in the Mammalian Lung.* The object of this study is to clear up certain differences of opinion that exist as to this matter and so obtain a more accurate knowledge of the anatomical conditions under which the respiratory exchange of gases takes place.

Dr. Watt—*The Precipitation of lime salts in colloid media.* An attempt to obtain some definite knowledge of the physical and chemical conditions which influence the deposit of lime salts in animal tissues and so throw light on the phenomena of bone-formation and calcification.

Departments of Physiology.

Professor Macleod (with assistants)—*The Physiological effects of decreased Oxygen.* A study of the action of decreased oxygen in its effects on the respiration, on the reaction and gases of the blood and on blood pressure. Results have been obtained indicating the method in which oxygen should be administered in such diseases as pneumonia.

2. *A Study of Surgical Shock.* To determine whether the production of an organic acid (lactic) in the blood and tissues could be the cause of this form of shock. The results were negative, indicating that the suggested treatment of persons in shock by the administration of alkali is not rational.

3. (With Miss Lang)—*A comparison of the Excitability of Muscle with and without its Nerves.* It is expected that this study will throw some light upon the supposed "trophic" influence of nerves.

4. (With Dr. Prendergast)—*The Glycogen Content of the Heart and other Muscles.* Previous observations had shown that the heart always has an abundance of glycogen even when other organs are poor in it. The present research was to discover whether starvation would have the same effect on the glycogen stores of the heart as on that of other organs. The results showed that the heart continued to retain its supply in this condition.

5. (With Dr. Fidlar)—*Have the rare gases of the Atmosphere any Physiological Effect?* A study of the respiration, energy exchange and body temperature of animals living in mixtures of pure oxygen and nitrogen or in air containing excesses or deficiencies of the various rarer gases (helium, etc.). The great technical difficulties encountered have been overcome, and it is hoped that definite results on the main problem will soon be forthcoming.

Dr. Olmsted—*Regeneration in Nerves with especial regard to the Effect on Sense Organs.* A continuation of work already started looking to the investigation of the restoration of function in the sense organs after destruction of their nerves and the condition of the sense organs during the ensuing changes.

Dr. N. B. Taylor—1. *The Measurement of Blood-flow in the Hands and Feet in Relation to certain Therapeutic Measures.* A study of the effect of massage, heat and cold, and muscular exercise on the blood-flow, to determine the value of such measures in augmenting the circulation in a given part of the body.

2. *Investigation of the Spread of Artificial Heat in Animal Tissues.* A study of the degree to which heat spreads from the superficial to the deep tissues. As heat is employed as a therapeutic agent it is of importance to know to what extent it penetrates animal tissues.

Department of Pharmacology.

Professor Henderson—*The Action of Atropine.* The object of this study is to standardize the dose necessary for definite effects.

Professor Sharpe—*An Investigation of the Toxic Principles of Certain Weed-Seeds.* Poisonous seeds have been found in mill and elevator waste and as food for stock and the study is concerned with the identification of these seeds and the nature of their effect.

Department of Biochemistry.

The various investigations now under way in this Department centre around one general problem, that of the chemical structure of the protein molecule. A knowledge of this is fundamental for the understanding of the chemistry of vital processes.

The individual problems now being studied are as follows:

Professor Hunter—1. *A Study of the Action of Trypsin on Casein.* The application of a method not hitherto employed for this purpose in the determination of the order and rate at which the various amino acids are liberated from the protein molecule.

2. (With Mr. N. S. Clark)—*A Study of the Trypic Digestion of Edestin.* With the same object as the preceding study.

3. (With Mr. Morrell)—*An Examination of the Arginase Method of determining Arginine in Protein.* An application of this method with the same object as the preceding studies.

4. (With Mr. Green)—*A Study of the Rate of Formation of definite Peptones in Protein Hydrolysis.* With the object of determining more accurately those peptones which have a shock-producing effect, and the stage at which they produce their maximum effect.

5. (With Mr. Urquhart)—*A Study of the Action of Paratyphoid Bacilli in producing Urocanic Acid from Hestidine.* A study of the production of unsaturated acids by the bacterial decomposition of amino acids.

6. (With Mr. Borsook)—*The Separation and Characterization of Proteoses formed during the Peptic Digestion of Gelatin and other Proteins.*

Mr. G. C. Robinson—*A Study of the Action of the Acetone-producing Organism upon Proteins.*

Mr. G. H. Berkeley—*A Study of the Biochemistry of the Grey Mold Botrytis.*

Department of Pathological Chemistry.

Professor Harding (with Dr. Hart)—1. *The Respiratory Exchange in Whooping Cough in Children.* An attempt to determine the compensatory mechanism that must act in the body during the spasm, and so acquire means for calling it more rapidly and effectively into play.

2. (With Mr. Potter)—*The Excretion of Acetone Bodies in Pregnancy.* A continuation of earlier work that indicated disturbances in the fats of the body as the cause of vomiting in pregnancy. The formation of acetone bodies is an indication of fat disturbance and the present study is an attempt to determine the extent of the disturbance.

3. (With Mr. Gaebler)—*The Investigation of some Conditions of Cretinuria.* Previous work had shown that a portion of the creatine formed in the body was formed by the body cells independently of the nature of the food. This study is to determine whether this creatine factor can be controlled and whether the excretion of creatine in pathological conditions may be taken as a guide in diagnosis and prognosis.

Department of Pathology.

Professor Mackenzie (with Dr. Warner)—*A Research upon the Changes in the Adrenal Glands in various Pathological Conditions.* An attempt to establish a relationship between acute infectious conditions and microscopic changes in the glands, and through this to contribute to a determination of the exact function of the glands.

Professor Maitland (with Dr. Cameron) —1. *A Research into the Characters of the Bacillus of Influenza.* A study of a number of different strains of the influenza bacillus to determine the causes of the variations it exhibits and the probable relationship of the organism to epidemic influenza.

2. (With Miss Cowan)—*A Research into the Antigenic Characters of Pathogenic Streptococci.* A study of the immunity reaction of a large number of strains of streptococci in an attempt to determine the relationships of individual strains to endocarditis and to each other.

Dr. H. S. Thomson (with Miss Fraser)—*Studies on a number of problems bearing upon practical Dentistry* such as the permeability to certain bacteria of the various filling materials; the germicidal properties of these materials; the analyses of commercial dentifrices; the preparation of vaccines for use in dentistry; and the effects of diet on degenerative changes in the tooth structure and in the structures of the oral cavity. These studies are being carried on under a grant from the Canadian Oral Prophylactic Association.

Department of Zymology.

Professor Speakman—*A Study of the ferments produced by the Acetone Organism.* Certain of these ferments have the power of converting complex carbohydrates into sugar and their study has interest not only from the theoretical standpoint but because it may assist in the research for a bacterial ferment that will convert cellulose into sugar.

2. (With Dr. Wynne)—*A Quantitative Study of the Results of Starch Fermentation in Acid Media.* It has previously been shown that the addition of certain organic acids to a medium in which starch is undergoing fermentation results in a portion at least of acid being converted into the corresponding alcohol. The study is an attempt to collect accurate quantitative data on this reaction.

3. (With Mr. Robinson and Mr. Berkeley)—*A Study of the constituents of beetroot molasses and sulphite liquor, in their relation to the fermentation of these liquids.* The study includes a determination of the alcohol yields from the different sugars present, the effects of the mineral acids occurring in the liquids and the amount of available nitrogenous compounds present. It is hoped that the results obtained may lead to a better utilization of these waste products from important industries in the production of industrial alcohol.

Department of Hygiene.

Professor Fitzgerald—1. *An Investigation of Diphtheria Mortality in Ontario.* A statistical study having for its object the determination of the factors which contribute to the present diphtheria mortality rate. It is hoped that the study will lead to the inauguration of an educational campaign throughout the Province whereby a reduction of the present excessive number of preventable diphtheria deaths may result.

2. (with Mr. Maloney and Mr. Hanna.)—*A Study of Diphtheria Toxin.* The properties and nature of the diphtheria toxin are being studied and the relation of the toxin to those produced by other bacteria. The study also includes an investigation of the conditions under which a supply of potent toxin may be prepared.

Professor Defries.—*A Study of Smallpox Vaccine.* A study of the effects of an increase of temperature and the use of certain new antiseptics on the determination of Vaccine virus. The study has already led to the introduction of certain improvements in the methods used in the production of the vaccine in the Connaught Antitoxin Laboratories.

Dr. Caulfield (with Dr. Hodge and Dr. Fraser)—*Investigations on the Lower Respiratory System.* These investigations include (1) the testing of the value of three biological tests in the early detection of tuberculosis in determining the proper curative adjustment of work and rest and in distinguishing "quiescent" from "cured" cases; (2) a study of the proteins and pollens that may be the cause of such non-infectious diseases as asthma and hay fever and a determination of the correlation that exists between these diseases and the phenomena of anaphylaxis; (3) a study of the effect of high pressure within the chest on the absorption of fluids from the bronchi and the pleural space.

Department of Medicine.

Professor Graham and members of staff—*An Investigation of the Methods of Physical Diagnosis with Special Reference to Diseases of the Chest and Abdomen.* An inquiry into such problems as the conduction of sound in the chest and the physics of percussion with the object of securing a better foundation for the interpretation of the findings obtained by physical diagnosis.

Dr. Detweiler and assistants—*Researches in Internal Medicine with special Reference to Infectious Diseases.* Several problems that come under this heading are being investigated, such as (1) the experimental pathology of pneumonia, to clear up obscure points as to the manner of infection, especially in lobar pneumonia; (2) a comparison of the value of Rosenow blood-cultures and those obtained by other methods, to determine the most accurate available method for ascertaining the presence of bacteria in the blood-stream; (3) the prevalence of Syphilis as indicated by the Wassermann reaction, a statistical study of the records of the syphilis clinic; (4) the Wassermann test in pregnancy and pneumonia, a study of the probability that certain cases of pneumonia and pregnancy yield positive results to this test, which has hitherto been regarded as specific for syphilis.

Dr. W. R. Campbell and Dr. Gallie and assistants—*Researches in Internal Medicine with special Reference to Diseases of Metabolism and Diseases of the Kidneys.* Under this heading the following problems are being investigated: (1) a study of methods of treatment other than surgical on goitres of the toxic variety; (2) a study of kidney efficiency in aged persons, to clear up the difficulty in distinguishing in such persons symptoms due to kidney disease from those due to the natural decline of physiological activity in the later years of life; (3) (with Dr. Gallie) An Experimental Study of the production of the fatal condition known as Calculuc Anuria in the hope that light may be thrown upon its causation and treatment; (4) a study of substances occurring in certain kidney diseases which interfere with the accurate estimation of creatinine excretion; (5) a study of certain features of a type of diabetes known as Renal Diabetes; (6) a study of changes in the blood pigment produced by certain pathogenic bacteria; (7) an investigation of the solubility of carbon dioxide in solutions of comparatively low hydrogen concentration, a question that has a bearing on the general problems of metabolism.

Dr. A. A. Fletcher and assistants—*Researches in Internal Medicine with Special Reference to Diseases of the Joints.* These researches include (1) a study of the various types of arthritis; (2) an investigation into the cause and treatment of disturbances of sugar metabolism in chronic arthritis; (3) the experimental production of disturbances in sugar metabolism by diets deficient in certain food factors.

Dr. Oille (with Dr. Jamieson)—*Researches in Internal Medicine with special Reference to Diseases of the Cardio-Vascular System.* These include (1) the determination by clinical and X-ray examinations of the relationship of the heart impulse as seen on the chest wall to the left border of the heart, a point of importance in physical diagnosis; (2) an inquiry into the discrepancies between experimental and pathological lesions of the conducting tissues of the heart shown by electrocardiograms.

Dr. W. F. McPhedran—*A Study on the Dietetic Treatment of Pneumonia.*

Dr. W. A. Dixon—*The Classification and Culture of various organisms other than Bacteria, causing Diseases of the Skin.*

Dr. Alan Brown (with assistants)—*Researches in Internal Medicine with Special Reference to the Diseases of Children.* These include (1) a continuation of studies on the causation of rickets and tetany; (2) a study of the chemistry of the blood and urine in nephritis in children. An attempt to classify the varieties of nephritis in children; (3) a study of sugar-tolerance in children; (4) a study of the blood volume in infancy; (5) further studies (bacteriological) in infectious diarrhœa; (6) studies of the metabolism in cases of chronic intestinal indigestion occurring in older children; (7) studies of the metabolism in a case of epilepsy with an associated intestinal intoxication; (8) a study of the malnutrition existing in children of school age, this investigation being made possible by a private contribution.

In addition opportunities offered by the Out-patients Department for the study of minor signs and symptoms of disease are being utilized by members of the Out-patient Staff.

Department of Surgery.

Dr. Gallie—1. *A Study of the Clinical Problems of Inflammation and Repair in Tendon and Fascia,* including a study of the changes in these tissues after transplantation.

2. (With Dr. Janes)—*A Study of Problems in the Surgery of the Testes,* including observations on (1) the effect on the testes of the severance of the main duct and the main artery; (2) the possibility of the restoration of function after such procedure; (3) the functional activities of testes transplanted into abdominal positions. The investigation is of importance in connection with the surgical treatment of children with abnormal development of the testes.

Dr. R. R. Graham (with Dr. Detweiler)—*A Study of Infection in the Intestinal Tract with Reference to its Causation and to the Disturbances in other Parts of the Body which result from it.*

Dr. L. B. Robertson—1. *A Research into the Causes of Fatal Poisoning which follows severe Burns in Infants and Young Children.*

2. *A Research into the Poisons produced in certain Cases of Intestinal Obstruction (Intussusception).* It is hoped that these last three researches will yield results indicating the method of treatment to be adopted to diminish the mortality in such cases.

Department of Obstetrics and Gynæcology.

Dr. W. A. Scott (with Dr. Cosby)—*A Study of the Blood Supply of the Pelvic Organs.* To obtain light on the causes of excessive bleeding that may occur from these organs in females.

FACULTY OF ENGINEERING.

Department of Applied Chemistry.

Professor Bain—1. *The Decomposition of Wood at Low Temperatures.* An inquiry into the possibility of modifying the distillation process and so obtaining some of the products in a purer state. The study bears indirectly upon the conservation of our forests by improving the utilization of them.

2. *An Investigation into a New Method of producing Sodium Sulphite,* with the object of discovering a method of preparing this substance—used in large quantities in the paper industry—from materials readily accessible in eastern Canada.

3. *An Inquiry into a Method for Separating the Potassium Carbonate occurring in Wood Ashes.* An attempt to work out a method of making available the potash contained in wood ashes, in view of the fact that no considerable source for potash has yet been discovered in Canada.

Professor Boswell (with assistants)—1. *The Direct Determination of Oxygen in Organic Compounds.* A continuation of work previously done looking to a simplification of the procedure and an extension of its applicability.

2. *The Determination of Magnesium.* It was found that the determination of magnesium by the ordinary method was unreliable in the presence of potassium. The conditions determining the inaccuracy were made out and the nature of the reaction that vitiates the result is being investigated.

3. *The Production of Absolute Formic Acid on a Large Scale.*

4. *A Study of the Constitution of Rubber.* A new formula for the constitution of rubber has been worked out and experimental evidence is being gathered to either confirm or refute it. Important in connection with the synthesis of rubber.

5. *A Study of the Mechanism of Catalysis.* An attempt to throw light on the mechanism by which the velocities of certain reactions are increased by the mere presence of a substance, which, itself, in many cases, remains unchanged. This phenomenon has assumed great importance in both pure and industrial chemistry.

6. *A Quantitative Study of the Complete Carbon Metabolism of the Oat Plant up to the Seedling Stage.* A study of the chemical processes concerned in plant growth.

7. Various problems which, together with some of those mentioned above, bear on the Theory of Solution have also been studied. These are mainly of scientific interest but have given results which make possible an increased yield in certain industrial processes, such as the manufacture of carbolic and oxalic acids.

Professor Ardagh—1. *A Research into the Cause of Activation of Carbon.* An effort to render wood charcoal of use in removing the colouring substances from sugar solutions, petroleum products, etc., for which large quantities of bone-black and Fuller's Earth are now imported.

2. *A Research to Discover a Method of determining Sulphate accurately in the presence of Potassium.* Such a method, if found, would be of great value in the valuation of fertilizers.

Department of Electrical Engineering.

Professor Rosebrugh (with assistants)—*The Devising and Application of Methods for the exact Measurement of signals received in Wireless Telegraphy.* The method devised was independently developed by the engineers of the Marconi Company, and a study of its application is now being made. It is hoped that the study will yield better data for planning overhead radio communication in Canada.

Professor Price and Mr. Duff—1. *An Investigation of the Causes of Inaccuracies in Current Transformers.* The transformers are used for measuring in power lines and circuits. It is hoped that the study will make possible the construction of better transformers.

2. *A New Device for Exact Measurement in Alternating Current Circuits.*

3. *A New and Simple Plan for Automatically holding constant the frequency of Alternating Current Circuits.* Of value in research laboratories, with probable application in power plants.

4. *A New Type of Electric Driving Mechanism for Astronomical Clocks.*

Department of Metallurgy.

Professor Guess, with students—1. *The Possibility of the Recovery of Silver from the Residues of Zinc Retorts.*

2. *A Determination of the conditions of Roasting of a Sulphide Ore that will yield sufficient Sulphurous Acid Gas for the Manufacture of Sulphuric Acid.*

3. *The value of the "Caron Roast" in the Recovery of Silver from Ores containing considerable Manganese.*

These are problems assigned to students for their graduation theses.

Department of Mining Engineering.

Professor Haultain (with Mr. Dyer)—1. *The Analysis of Ball-paths in Ball Mills by Photography.* A study bearing on the variations which occur in the capacity and efficiency of these mills used in the crushing of ore.

2. (With assistants)—*On the Refining of Graphite.* A continuation of work on this problem, the present work being concerned with the separation of the finer sizes of Graphite from Canadian Ores.

3. (With assistants)—*Studies of the Concentration of ores by Flotation and the Hydraulic Classification of crushed ore.* Valuable results have been obtained in the concentration by mechanical means of the low grade ores of the Sudbury district.

Mr. King—1. *On the Assay of Platinum.* A research into methods for obtaining an accurate assay of platinum.

2. *On the Assay of Graphite.* An attempt to devise more rapid and simpler methods in the determination of graphite in its ores.

Mr. Dyer—*An Apparatus for the rapid and accurate determination of Magnetic Minerals in Ore Samples.* Such an apparatus is needed for the determination of the magnetic contents of the low grade magnetic deposits of Ontario.

Department of Applied Mechanics.

Professor Gillespie—1. *An Experimental Investigation into the Strength and Behaviour of Reinforced Gypsum Slabs for Roof Construction.*

2. *An Experimental Investigation into the Effect of varying the proportions of the Various Ingredients of which Portland Cement Concrete is made.*

Professor Young—*An Experimental Investigation into the Resistance of Reinforced Concrete Beams to Torsion or Twisting.*

Department of Surveying and Geodesy.

Professor Stewart—*A Determination of the Effect of Meteorological Conditions on Latitude Observations.* A study of the effect of meteorological changes in altering atmospheric refraction and so producing discrepancies in determinations of latitude.

Department of Thermodynamics.

Professor Angus—1. *A Study of the Insulating values of different Building Materials.*

2. *A Study of the Efficiency of House Heating Boilers and the best Method of Operating them.*

Professor Parkin—1. *An Investigation of Air Speed Indicators for Wind Channel Use.*

2. *The Effect of Wing Tip Form with constant Aspect Ratio and the R.A.F. 6 (a) Aerofoil on the Aerodynamical Characteristics of the Section.* A study of the relative merits of the different wing tips now used in aeroplanes, with a view to developing other forms of higher efficiency.

FACULTY OF DOMESTIC SCIENCE.

Department of Household Science.

Professor Laird and assistants—1. *On the Extent to which Textile Fabrics are being misbranded in Stores and on the extent to which Silk Fabrics are adulterated with injurious chemicals.*

2. *On Malnutrition in Children.* A study of the dietetic causes of malnutrition in children as part of a larger plan for the investigation of malnutrition.

3. *On the Use and Dietetic Value of so-called Egg Substitutes.*

Department of Food Chemistry.

Professor Benson and assistants—1. *A Study of the Composition of Infusions of Tea and Coffee.* An examination of the actual amounts of stimulant substances and astringents in infusions of tea and coffee prepared in various ways.

2. *On the changes occurring in the Flesh of Fishes as the result of keeping and of Cold Storage.* This study is being carried on in co-operation with the Biological Board of Canada.

3. *Studies on the Normal Basal Metabolism of Women of different ages.*

FACULTY OF FORESTRY.

Professor Howe—*An Investigation of the unburned, cut-over Pulpwood Lands, with special Reference to the Regeneration and Rate of Growth of Balsam Fir and Spruce in certain Districts in New Brunswick, Ontario and Quebec.* This investigation includes the making of surveys of forest regeneration and growth on permanent sample plots and observations in experimental cutting areas to determine the most profitable logging methods which will yet insure another growth of spruce or balsam on the same ground.

Dr. White—*A Study of the Present Condition of the much burned old Pineries of Ontario, with special Reference to the regeneration of White Pine.* In this investigation some 75,000 acres in Central Ontario have been covered and it will be continued on representative areas throughout the Province.

Professor W. N. Millar—1. *A Study of the Cypress Hills Forest Reserve.* An investigation of the amount of timber present and of its annual rate of increase, with the object of obtaining data for a plan of cutting and marketing that will render the Reserve continuously productive.

2. *A Study looking to the Replacement of Pine by Natural Methods on the severely burned Areas of the Petawawa Military Reservation.* This Study involves an investigation on permanent sample plots of the conditions which favour or prevent reforestation by pine in burned over areas.

3. *Field Studies for the Preparation of Volume and Growth Tables for White Pine and Red Pine in the East and for Engelmann Spruce and Lodgepole Pine in the West.* The object is to determine the average merchantable contents of trees of these species of a given diameter and height class. Such data are necessary in making plans for continuous production.

APPENDIX B.

Statement as to the needs of the various Departments for the more efficient instruction of Graduate Students and for Research.

The following is a resume of replies received from the Heads of the University Laboratories in response to a request for a statement of the needs of the University for carrying on more efficiently work with Graduate Students and Research.

I. The need most frequently expressed is for more space. Graduate work and research cannot be carried on under the same conditions as the routine laboratory work for undergraduates. Quiet, the necessary space for the required apparatus and some guarantee that the apparatus will not be interfered with are essential, and these conditions can only be realized in private rooms or in small special laboratories accommodating only a limited number of research workers.

Some of the laboratories are already so overcrowded with undergraduate students and so inadequate, according to modern standards, for what is required of them, that new buildings for their accommodation are urgently needed. This is especially true in the cases of the Departments of Anatomy and Botany. Anatomy at present occupies a portion of the Biological Building, but the space available for it is so restricted that even the development of the undergraduate courses along modern lines is at a standstill, and accommodation for graduate work and research, such as should be provided for, do not exist. Botany occupies what was originally a dwelling-house, and, besides being hampered by overcrowding and the lack of a suitable lecture-room, is seriously in need of greenhouses necessary for studies in plant physiology and plant pathology.

The continually increasing demands of the clinical departments in Medicine for laboratory space call for a considerable enlargement of the Pathological Building, in which accommodation might also be provided for the Department of Pharmacology now confined to quarters that are altogether inadequate.

For several other departments there are expressions of a need for expansion. Thus the Department of Biology finds need for space to be devoted to animal breeding for embryological and experimental breeding purposes, and to an embryological laboratory; it also expresses a need for a Fresh-water Laboratory where problems especially connected with our fresh-water fisheries might be worked out. The Department of Chemistry needs additional space both for undergraduate and graduate students, the present insufficiency of space being partly overcome by the unsatisfactory method of using rooms in another building temporarily loaned by other departments. The Department of Applied Chemistry calls for space for graduate students, and the Depart ment of Geology for space to be devoted to a laboratory for Economic Geology.

II. Requests for additional laboratory equipment are not frequent, but the hoped for development of graduate and research work will undoubtedly entail a need for special apparatus and facilities in several cases. The Department of Astronomy, however, finds itself seriously handicapped by an insufficient equipment, as a result of which it is unable to prepare its own records in certain lines of work.

III. Several departments urge the advisability of a greater number of fellowships, scholarships and research assistantships, to attract men into graduate work. The demand for men with the quality of training which only graduate work can give has been referred to in the body of this report, and it is generally felt that every possible encouragement should be given men who desire to take such work. Specifically, requests for such foundations have been made by the following departments: Palæontology, Mineralogy, Applied Chemistry, Metallurgy, Mining, Biology, Botany, Hygiene, Gynæcology and Household Science.

IV. A need quite as urgent as that for additional space is felt by several departments for the appointment of additional members to the teaching staffs, so that senior members, and, indeed, the entire staff, should have greater freedom from undergraduate teaching and administrative duties to devote themselves to graduate work and research. This need has also been mentioned in the body of this Report, and in the case of certain departments, especially, it is the most serious obstacle in the way of the promotion of graduate work and research. The Departments which have made special mention of this need are as follows: Palæontology, Astronomy, Applied Chemistry, Medicine, Pathology, Pharmacology, Biochemistry, Anatomy and Food Chemistry. It must not be supposed, however, that these are the only departments, of those concerned with this Report, in which a need for a larger teaching staff is felt.

V. Closely connected with the need for additions to the teaching staff, and desirable for the same reasons, is that for skilled technical assistants. In every scientific laboratory much time must be spent in the construction and setting up of apparatus and in the performance of routine and, for the most part, mechanical, operations in the preparation of material for study. Such work can be done by technical assistants, and much time and energy saved thereby to the research workers for the working out of their problems. The departments making special requests for such assistants are: Palæontology, Biology, Botany, Anatomy and Pathological Chemistry.

UNIVERSITY EXTENSION.

The Department of University Extension finds almost unlimited opportunities for carrying university teaching throughout the Province, but is seriously handicapped in developing these opportunities because of lack of funds. The lines along which work is now being done may be summarized as follows:

1. Teachers' Classes, Correspondence Work, and Summer Sessions to enable teachers in service to secure the Pass B.A. degree. From the point of view of the youth of the Province there is possibly no more important phase of university activity than the improvement of teachers' qualifications, and the teachers of Ontario are eager to take advanced courses. The enrolment this year is the highest on record because more teachers than before have learned of the existence of these courses. Increased publicity in the form of explanatory bulletins will augment the attendance at Summer Sessions and in Teachers' Classes far beyond the limits prescribed by the present size of the University staff. In a Province where there are almost 15,000 teachers it is not unreasonable to hope for enrolment in the near future of at least 1,000. A greater variety of subjects should be offered in summer courses, and by correspondence during the winter. The latter form of work necessitates, of course, a larger office staff.

The Extension Department does not confine its attention to holders of first class certificates only. Teachers with third class or second class certificates, or even with no certificates, are prepared by correspondence during the winter for the summer courses offered by the Ontario Department of Education; others are given assistance towards the commercial specialist's certificate.

When the degrees in pedagogy are included, it is no exaggeration to say that the Department of University Extension has something to offer to every teacher in Ontario. It is now serving two hundred teachers; with room for expansion it could serve ten times that number.

2. Local Lectures. There is a marked demand throughout the Province for single lectures and for courses of lectures. This demand would be very much greater were it more generally known that the University offers such service. The obstacles here are (*a*) the expense of publishing and distributing descriptive bulletins and (*b*) the meagre remuneration to lecturers. Most of the organizations that wish to have this lecture service have only limited funds at their disposal. By regulation of the Board of Governors the local organization is responsible for the lecturer's expenses and an additional sum of $5.00; to this amount there is added another $5.00 from the University's funds. Even the lecturer's expenses, plus $5.00, is to most societies a large sum and prevents them asking for as many lectures as they would like to have. On the other hand, the lecturer who receives his expenses, plus $5.00, from the organization, and $5.00 from the University, feels that he is rather poorly repaid for the time and energy expended and the inconvenience attendant upon his trip.

3. Tutorial Classes. Evening classes in English literature and in economics are being carried on for those in Toronto who may wish to take advantage of them. The fee charged each student is $10.00 for the year's course and the number in any class is limited to twenty. The instructor receives $200.00 for fifty hours' class work. This rate is not attractive to professors who are anxious to have time for reading and self-improvement, and it does not seem possible to increase the fee without reducing greatly the attendance.

One example of the limitations imposed by lack of funds may be cited. A request came for a tutorial class in Streetsville for the members of the Junior Women's Institute and the Junior Farmers' Institute of the surrounding district. These rural young people were anxious for some course—they scarcely knew of what type. A class was arranged, but the financial difficulty again presented itself, and it is not yet clear where the funds to pay the instructor are to be found.

For both the local lectures and the tutorial classes the service of one or two instructors, giving full time to this work, seem to be absolutely necessary. As at present conducted the system, or rather lack of system, is wasteful of time and money in comparison with the results secured. There seems to be more than enough work for two men—in Peel County alone there are six centres similar to the one in Streetsville. The Province could be literally dotted with tutorial classes for rural young people if a sufficient staff were available.

4. Workers' Educational Association. Under this organization over one hundred and fifty men and women in Toronto, and over thirty in Hamilton, are being instructed by members of the University staff and others in such subjects as economics, political philosophy, psychology and logic, English literature, public finance, money and credit, civic administration. For lack of funds these courses have not been very fully advertised; more extensive advertising would treble the numbers. The instructors receive $150 for fifty or more hours of work in class, but they all regard this as a form of public service and cheerfully accept the duty. (It should be noted that the two hours per week spent with tutorial classes of any type are only the minor part of the time involved—the preparation for the class makes serious inroads on the little leisure available to any university instructor.)

The beginnings of adult education in England were mainly by way of courses of lectures that went by the name of the University Extension Lectures. It happened that there were amongst the original lecturers one or two men of genius, and for the time the influence of the system was very considerable. In 1906, at a dinner of Dons in Oxford, the growing dissatisfaction of labour men in England was voiced by a young Scotch labour man, who took the opportunity given to him of explaining to his audience the fact that the University of Oxford was not doing its duty by the labour world. Out of this grew the organization called The Workers' Educational Association, the basis of which was tutorial classes. The tutorial class gives an opportunity for a group of men and women small enough to make general conversation possible, and, aided by the presence of a trained tutor, to work and think together. The tendency in the English W.E.A. was, as it has been in Toronto, to devote its attention to economic subjects. In England that phase soon passed, and a large demand grew up for the variety of subjects generally included in what constitutes a liberal university education.

In Toronto there was at first the same demand for economic subjects, and there is now the same tendency to branch out into other subjects, such as history, English literature, and psychology. In the present session the largest of all the classes is the one in English literature.

There is, in fact, at this moment a crisis in the whole world of education. It is being discovered that the training provided by the schools and the technical teaching provided by that side of the universities have a tendency to leave out the most important part of education. Neither of them develops, as far as it might, the power of thinking nor of useful criticism; and, what is more important, neither of them goes as far as it might in building up a thoughtful, comprehending human spirit.

Some of the eagerness with which labour people are pursuing their material ends is now being transferred to a desire for a higher culture, and, above all things, this should be encouraged. Nothing severs sets of people more completely than the existence of different and more or less unrelated standards of thinking and speaking. There is immense danger to a country in the existence of two languages, the language of the cultivated and the language of the street, neither of which is really comprehensible to the other. If it could be brought about that more or less the same proportion of every class could be found in the ranks of thoughtful, cultivated people, an immense stride would have been made in the abolition of class differences.

There is another way of looking at this problem, too, and that is this: The working man after all desires not alone material betterment, but a new status and a better life. There is only one way in which he can fit himself for that, and that is by filling his increasing leisure with the materials for better thought.

There is an extraordinary example of what can be done by way of the equalization of classes in such a discussion as that printed by the Garton Foundation in England, in which the method, quality and discussion among six people, of whom three were labour men and three men of learning who were university professors, were quite indistinguishable.

The whole basis of national unity rests upon the theory of the nation being an aggregation of persons who, on the whole, think alike, and it is very difficult for two sets of people to think alike who speak more or less different languages and think in different categories. In the past the reason for these differences has lain to a large extent in the necessity on the part of labour people of stopping their education at an early age, while persons of substance could continue their education for some years onward. This difficulty cannot altogether be cured, but it can be greatly modified in one way, and in one way only, and that is by a large expansion of adult education.

5. A short course intended primarily for Members of Farmers' Clubs. This is being arranged in co-operation with the Executive of the United Farmers of Ontario. It is to be held for two weeks in February, and the subjects to be offered are economics, public hygiene, architecture, English literature, and Canadian history. The attendance expected by the U.F.O. Executive is between one and two hundred men and women. This course should be made a permanent feature of extension work, and, if at all suc-

cessful, will, no doubt, be largely attended each year. The U.F.O. representatives feel very strongly that this course, since it is given by the Provincial University, should be free of all cost except a nominal registration fee of $2.00.

Apart from the activities outlined above, the Department of University Extension is prepared to perform any service that any section of the public may require, so far as present facilities will permit. Opportunities for public service of this kind need not be sought; they come spontaneously. And it is most embarrassing to be compelled, for financial reasons, to be somewhat half-hearted at times in responding to some appeals. People everywhere seem to feel that, because they help to support the Provincial University, the cost of its services to them should be merely nominal at most. But in order to carry out even moderate and already urgent developments, a larger office staff, together with increased space accommodation, a teaching staff for winter and summer work, and a much larger budget to provide staff, equipment and advertising, are necessary. With an available budget of $30,000 for the year 1921-22, present activities could be more adequately developed, and the foundation laid for really large and effective work in the future.

A change is passing over the people of this country, and it is a change for the better. There is an enormous demand for adult education in almost every class of society, and this demand could easily be multiplied by judicious publicity and by compliance with the perfectly reasonable requests that are coming in almost daily. The public look to the University to supply this demand. The average citizen feels that the Provincial University is, in part at least, his own property, and that he has every right to ask for such education as he requires.

The following quotation may serve to illustrate extension arrangements in United States universities, some of which have more than ten times as many students in their summer schools and evening classes as has the University of Toronto. This is from a letter written by the Director of Extension Service in the University of Michigan.

> " At the present time there are in this country two general methods of conducting University Extension work. One is known as the Wisconsin plan, under which plan the Extension Division operates almost independently of the regular faculty of the University. For example, at Madison, Wisconsin, they have a separate Extension building and a separate Extension faculty. The plan pursued by the University of Wisconsin. . . . enables the Extension Division to carry on a very intensive type of work. I believe the Wisconsin budget (biennial) amounts to something like $250,000.
>
> " The other plan is that which is sometimes referred to as the Michigan plan. Here our Extension work is carried on through the medium of regular organized University channels. As far as possible we use for this work men of the various departments of the University. This plan does not permit of as varied or extended a programme as that in vogue at the University of Wisconsin; . . . . it tends, however, to secure a spirit of co-operation on the part of the entire faculty.
>
> "As explained in our General Bulletin, the University of Michigan Extension Division operates through the medium of twelve bureaus, each bureau touching some phase of our regular campus activities."

In the University of Toronto a combination of these two plans would seem to serve the purpose best. As extension courses in literature and history are in greatest demand, one or two regular extension instructors should be available for full-time work in these two subjects, and members of the regular staff might be asked to give occasional lectures in other subjects as required.

DEPARTMENT OF SOCIAL SERVICE.

First Year.

Courses prescribed for all full-time students:

*1. Evolution of Modern Industry (deals with industrial revolution, studies association of capital and labour, and general social and political reactions of modern industrial changes).

*2. Social Economics (elementary principles, relation of wealth to welfare, distribution of wealth and poverty).

*3. Introduction to Psychology (Psychological reactions of social significance).

*4. Social Ethics (Basal conceptions and application to personal conduct and social relations).

5. Social Treatment of Poverty (Causes and inter-relations, social diagnosis, methods of constructive relief and rehabilitation).

*6. Community Organization (development of associations and institutions for extending community life).

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*Courses marked with asterisk given by members of Staff of University. Remainder given by city social workers and others.

*7. Hygiene and Public Health (Communicable diseases and their control and prevention).

Each student elects three courses from the following:

8. The Municipality: Its Work and Problems (Municipal and Citizen Organization; Municipality; city government and education, etc.).

9. Recreation and Playground Work (Organization and administration; practical).

10. Child Welfare (The child and the family—care of dependent, defective and delinquent children).

11. Housing and Immigration.

12. Psychiatry (Relation to social work)—Study of symptoms and method of diagnosis.

13. Occupational Therapy (History and application).

14. Rural Conditions and Problems (Relation of rural and urban problems—corollary of courses on Municipality and Community Organization).

Field Work.—In addition to 10 or 12 hours' classroom work a week, each full-time student does 10 to 14 hours' field work weekly.

Aim of Field Work.

1. To introduce student to various forms of social work.
2. To widen the student's environment by a wide experience of living and working conditions.
3. To provide concrete illustration of lectures—rounding out abstract theory by concrete experience.
4. To give some training in active performance of social work.

Method.

1. Individual students—studied and vocational guidance given.
2. One day weekly devoted to observation of social agencies, institutions, factories, department stores, etc. Numerous agencies, firms, etc., co-operate with Department in making this possible.
3. Each student apprenticed to suitable agencies to perform work under supervision (7 hours weekly).

   16 city agencies co-operate with Department in this work. Those agencies appoint supervisors at the request of the director of field work, and methods of experience are discussed. American schools dealing with classes of this size provide payment for the supervisors in the agencies which thus co-operate.
4. Weekly field work discussion hour. Current events in social work considered. Special field work experiences discussed and relation of practical work to lectures emphasized.

50 full time students are registered in first year work.

295 part time students take selected courses.

SECOND YEAR.

Continues lecture work of first year and allots large portion of time for field work—students being expected to choose some definite line in which to do intensive social work.

7 full time students are registered.

5 part time students are registered.

Special Features of Work.

1. *City Work*: Director of the Department and Director of Field Work active in various forms of city social work—public addresses, acting as members of Boards, etc.; this helps to develop co-operation.
2. *Course of Public Lectures* on social questions.
3. *Special Extension Courses*, e.g., Mental Hygiene, Employment Management, etc.
4. *Consultation Service*: Department offers this to all interested in development of social work in Canada.
5. *Library*: Borrowing privileges for students and staff of Department of Social Service and Department of Public Health.

   Reference privileges for social workers and any others interested in social work.
6. *Occupations*: An outgrowth of field work. Majority of students placed in positions in social work through Department; agencies from all over Canada consult Department in this regard.

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*Courses marked with asterisk given by members of Staff of University. Remainder given by city social workers and others.

THE ONTARIO COLLEGE OF EDUCATION.

A Summary of its Immediate and Less Immediate Needs.

The Ontario College of Education was created under an agreement between the University of Toronto and the Department of Education to provide:

A. Graduate courses in Education.
B. Courses for High School Assistants and Specialists' certificates.
C. Such additional courses as may be instituted from time to time.

In the terms of the agreement the budget of the College is to be voted annually by the Legislative Assembly as a part of the estimates of the Department of Education, and the contents of the courses for teachers' certificates, as well as the personnel of the staff, are to be subject to the approval of the Lieutenant-Governor in Council.

A. As to the Graduate Courses.—B.Paed. and D.Paed. courses are conducted by the College both intra- and extra-murally. Attendance during at least two summer sessions is compulsory in the D.Paed. course. During the present Regular Session, intramural instruction is given in both the B.Paed. and D.Paed. courses. If, as is probable, the students registered in these courses in the former Faculties of Education transfer their registration to the Ontario College of Education, the total registration will be 221. The Summer Session of 1920 in these courses was attended by 51 students. These figures are evidence of the present demand for advanced or graduate courses in Education. The scores of Canadian teachers who attend Summer and Regular Sessions in Education at Columbia, Chicago and Washington Universities are further evidence. The demand will increase. University laboratories are rapidly expanding the bounds of professional education and organizing it into a science. State systems of education and, in particular, the centralized systems of this continent, need educational experts by the hundreds—principals, supervisors, inspectors, directors and training school instructors. These educational leaders cannot be content with as much of the new science of Education as is imparted to the rank and file of teachers in the typical one year's course of the training schools.

The teachers of the United States realize this. In their universities Education probably stands first among university subjects in the number of registered graduate students.

Development of graduate work in Education will sooner or later involve:

1. An additional instructor in (*a*) School Administration, (*b*) Philosophy of Education.
2. Additional Lecture-rooms (2).
3. A Library in professional Education.
4. Complete Junior and Senior (Public and High) schools for experimental work, i.e., the addition of Grades I and II and of the Kindergarten to The University Schools.
5. Half-a-dozen graduate scholarships or tutorships of $500 each.

B. As to High School Assistants' and Specialists' Courses.—These courses have been organized to include one, and not more than two, of the following subsidiary courses:

1. Course for the Elementary certificate in Physical Culture.
2. Course for the Elementary certificate in Art.
3. Course for the First Class Public School certificate.

Under difficulties by no means insignificant, due to distance and conflict in time-tables, the course in Physical Culture is given in the Household Science gymnasium (women) and in Hart House gymnasium (men). A gymnasium on the premises of the Ontario College of Education would save time and increase efficiency.

The course in Art is given by one instructor in one room. This, of course, can never be satisfactory. The greatest immediate needs are (1) a modelling room, (2) store-room for lockers, working material and models.

The course for First Class Public School certificates is supplementary to the High School Assistants' course. Such a supplementary course is necessary. It provides a way—almost the only way—by which college graduates may train for Public School work, and thus for the higher professional posts as inspectors, directors, training school instructors, etc. This course for Public School certificates, which will grow in popularity with an increasing attendance in the High School Assistants' course, requires for demonstrations and practice-teaching a complete and accessible Junior (or Public) School. Completeness here involves again the addition of the Kindergarten and Grades I and II to the list of classes, and of accommodations for physical training—in particular, a gymnasium.

C. As to Additional Courses to be Instituted.—Courses for the Ordinary and Specialist certificates in Household Science have already been instituted. It is not improbable that these courses will be paralleled later by courses for the Ordinary and Specialist certificates in Manual Training.

Temporary and very inadequate provision for the Household Science course has been made this year. Two small, badly-lighted, ill-ventilated rooms have been set apart for a service for which at least five approved rooms are needed—and one additional instructor. When, or if, courses for teachers of Manual Training are instituted, one additional instructor and five or six approved rooms with equipment (forge and stock room, machine shop, drafting room, woodwork room, locker room, etc.) will be needed.

D. As to General Conditions.—(1) The University Schools are the experimental, demonstration and practice schools of the Ontario College of Education. They must be adequate for this function. They cannot be adequate without Kindergarten, Grade I, and Grade II classes. This will require at once three additional classes and three additional teachers, and ultimately five of each. And the Schools must also be model schools. They cannot be model or modern schools, they cannot even comply with the minimum requirements of the Province, until they are equipped with a gymnasium and an assembly hall.

(2) The attendance in the course for High School Assistants this Session is 69. When the Universities have begun to function regularly in the post-war period, this number will probably increase to the pre-war total of 125. Having regard to optional courses, 125 students will mean four classes, and four classes will need four lecture-rooms. At present the Ontario College of Education has one approved lecture-room.

(3) All countries are suffering from a scarcity of teachers. Students do not throng the training schools. In the effort—a desperate effort in some countries—to provide an adequate supply of trained teachers it is very probable that Departments of Education will take vigorous measures to reduce the cost of training. This would probably mean the cancellation of fees for tuition, provision for a supply of text-books and other material, and the establishment of residences or dormitories.

SUMMARY.

If the *Immediate Needs* of the College are met, the budget will contain additional items as follows:

(1) Five rooms for the Household Science course, one additional room for the Art course, three additional rooms for the High School Assistants' course.
(2) A gymnasium, assembly hall and educational library.
(3) A kindergarten and two class-rooms (Grades I and II).
(4) Salaries of four additional instructors.

When the *Less Immediate Needs* of the College are met, the budget will contain additional items as follows:

(1) Five rooms for Manual Training, two rooms for graduate work.
(2) Instructors in graduate courses 2, in Manual Training 1.
(3) Six graduate scholarships.
(4) Cancellation of fees, provision for expenses.
(5) Residences.

APPENDIX II

STATEMENT OF ALUMNI ASSOCIATION OF UNIVERSITY OF TORONTO

MR. CHAIRMAN AND COMMISSIONERS:

I appear before you in a representative capacity as the President of the Alumni Association of the University of Toronto. Though some of the members of your Board are, I know, members of that Association, yet I doubt whether even they are aware how numerous is the constituency that I have the honour to represent.

The provision of the constitution in respect of membership is as follows:

"The membership shall consist of all graduates and undergraduates in any faculty or department of the University of Toronto, and of all persons who have attended the regular exercises of any department of the University for a whole session, and of all members of the governing and teaching bodies of the University and of federated and affiliated institutions."

As you will have observed, the membership embraces not only all graduates of the various Faculties, federated and affiliated Colleges of the University, but also every one who has attended the regular exercises of any department for a whole session. Upon the best information that I can secure the total number of living Alumni (who, consequently, are members of this Association) is not less than 25,000, of whom it is estimated that 18,000 are resident in Ontario, and, out of these, 6,750 are resident in Toronto.

I cannot profess to have received from each of these 25,000 members a mandate to make the representations which I shall submit to you, but for them I have the authority and sanction of that large elected body known as the Council of the Association, as well as of the Board of Directors, who, as you will observe, sign this memorandum.

I am thus authorized to express to you the unqualified approval and full support by the Alumni Association of the representations which have this morning been placed before you on behalf of the Board of Governors and the Senate. I have not only listened to them in their final form as now presented, but those whom I represent have had an opportunity of considering from time to time the substance of these representations, and I am instructed to say to you, in the most emphatic and unequivocal way, that they have the full and hearty support of the Alumni.

Now, having said so much in general terms, I pause to make one personal observation, viz., that it has fallen to my lot to sit as a Commissioner on matters of public interest, and I found little advantage from the bare repetition by different witnesses of the same statement.

I could not hope to add anything to the admirable presentment which has been made on behalf of the Board of Governors and the Senate. Anything that I could say would be no more than a weakened and feeble restatement of what you have already heard.

For these reasons I propose to dispense with any reiteration of the representations which have been made by the Board of Governors and Senate, though in respect to one or two of them I am desired, on behalf of the Alumni, to add a few observations.

The Alumni Association desires to emphasize the broad fundamental consideration on which, in their view, the conclusions of your Commission, Sir, must be based, viz., that the University of Toronto for some years prior to the war had been in a process of development and expansion necessitated by two causes.

1st. By the increasing numbers of those applying for admission to the University, thus demonstrating the increased demand by the people of this Province for a University training.

2nd. By the necessity for more adequate equipment of all departments and by the necessary addition of new departments, so as to fulfil the requirements of a University of the first class and to keep it on a par with the other great universities of this continent.

At the beginning of the war in 1914 this development and expansion was proceeding, but had not kept pace with public requirements. The war arrested it, and now the war being over the public demand for increased University education, for expanded accommodation, for improved facilities, and for the addition of new departments is more overwhelming than ever, and to meet it there are only the facilities which existed before the war and which were inadequate even then.

Let me repeat. It is the requirements of our people in regard to University education that necessitates expansion. The expansion can be accomplished only by the grant to the Provincial University of an increased revenue, constantly expanding as the Province expands and develops in population and wealth.

RESEARCH.

Next, I desire to mention, without elaborating it, the necessity for increased facilities in the department of research. That necessity is realized more particularly by those of the Alumni who are engaged in manufacturing and allied commercial pursuits. To them the convenience and value of an adequate and convenient research department here in the centre of the Province to which they can come in person for assistance and advice without a trip to Ottawa or elsewhere, appeals with special force.

But quite apart from that specific and narrow ground, it seems to me that the time has now arrived in the history of the Provincial University when there should be devised and established a definite plan of development in accordance with which its future development should be consciously directed, not alone in scientific research, but generally in order that it may maintain and increase its position as an institution of the highest learning. That means on the academic side quality as distinguished from quantity. It means development at the top and possibly it may mean that certain portions of junior undergraduate work should be relegated to Collegiate Institutes.

The Alumni suggest to you that a great Provincial University of the highest type is essential to the rapid and permanent development of our natural resources and thus of the wealth, comfort and highest civilization of all our people, and that if, in the days to come, we are to secure and maintain such a University of the highest standing it is desirable that your Commission should now formulate a well-balanced plan for future development, so that its growth may not be by way of accretions to an amorphous mass, but on definite lines laid down by this Commission. The Alumni trust that you, gentlemen, may find it within the scope of your Commission and within your power to formulate such a plan.

SALARIES.

I would also refer very briefly to the question of salaries. The Alumni, distributed as they are through all walks of life and through all parts of the Province, appreciate very clearly how the purchasing power of the dollar has decreased, and appreciate how essential it is that the professors and administrative officers of the University should receive an increase of salary in some degree at least comparable with the increased income now received by men of like standing in American Universities and by men of like standing in other walks of life. If not, we must lose our best men. Salaries must be raised or the standards of the University must be lowered. On that point we wish to refer you to reports for 1919 and 1920 of the Presidents of the large American Universities. You will find in those reports a more cogent presentation of the salary question than we could possibly present.

The Alumni whom I represent include those of the Federated Universities and Colleges which now form part of the University of Toronto, and, on their behalf, I wish to add in the strongest possible manner our accord with the representations made officially by their governing bodies. In entering Federation they did so upon request, and to further the principle that "Unity is Strength." By so doing they made great sacrifices and deprived themselves in large measure of possible endowment and financial assistance from those who would have aided them as separate institutions. If the University which they joined and to which they are proud to belong, should not receive from the Government the support which they were led to expect, it would not be going too far to say that there would be a breach of faith. In the language of the Report of the University Commission of 1906, "The reluctance of the Federated bodies to resign their independent existence sprang from causes hostile to them. It arose from pride in their own colleges, and they doubted whether the relinquishment of advantages gained by so much sacrifice and loyalty was a wise step."

That by the completion of Federation these advantages have now been relinquished is an outstanding fact which, we submit, is entitled to remembrance and recognition.

These four points, viz.:

(1) The fundamental necessity of increased facilities,
(2) The development of the University at the top,
(3) The increase of salaries to the staff, and
(4) The obligation to the Federated Institutions,

I have mentioned because, though already dealt with, I think they come with peculiar force from the constituency whom I represent. That concludes what we have to say in support of the memorandum presented by the University Authorities.

But there are certain considerations which have not been specially touched upon in the presentment of the Senate and Board of Governors and which seem to us to be not only pertinent, but to be peculiarly appropriate for presentation to you, Sir, by the Alumni Association.

The Alumni desire to attract your attention to three of the activities at present connected with the University so that if the considerations which we present commend themselves to your Commission you may recommend the development, improvement and strengthening of these activities. These three are: (1) The Bureau of Publicity; (2) the University Alumni Association; (3) that branch of the Registrar's office which keeps the official records of graduates, their addresses and the personal and geographical files of all the Alumni.

The operations of these three activities are closely interlaced and mutually dependent on each other.

They might be designated as the productive activities of the University, and they will present to you certain considerations which are entirely distinct from those which relate to the strictly academic side.

Let me explain that in what I am about to say I am not criticizing any past action of the Board of Governors, the President or the Registrar in respect to any of these matters. The Alumni Association could not have developed as it has but for the generous assistance it has received from the Board of Governors. We are all aware that the President is fully alive to the importance of these three activities and has done all that he could to aid them, and the Registrar has done all that was humanly possible with the file records, having regard to the limited equipment and staff at his disposal.

My point is, that they ought on principle to be strengthened, expanded and developed, and it will pay to do so.

The work of a Bureau of Publicity has two branches:

(1) To disseminate information to the general public regarding the University and what it is doing.

(2) To ensure frequent and regular communications from the University to its own Alumni.

In a democratic country such as this every public body realizes the necessity of justifying to the people at large its administration of the affairs committed to its charge.

Outstanding examples of this demand and of compliance with it are afforded by the practice of our Government, both Dominion and Provincial.

The Hansard reports of Parliamentary Debates, the Blue Books, the discussion of public questions in the Press, the speaking tours of Ministers of the Crown, and the Bulletins on the current work of the Departments which are now sent out by the Provincial Government, all afford examples showing the inexorable character of the principle I have stated. The Provincial University is a public body dependent for support on the Provincial Exchequer. In University matters the principle to which I have just referred has been applied only to a very limited extent. It is true that this year the Board of Governors has appointed a gentleman to devote part of his time to publicity. The Alumni Association desire to express their approval of what has been done in this regard, to bear testimony to the excellent quality of the work that is being done, and they hope that your Commission may see its way to recommend that the beginning which has thus been made should be continued and extended by establishing an adequate publicity bureau.

The Alumni Association is of the opinion that only through such a bureau of publicity can the people of this Province be brought into contact with the University and be made to realize the benefits to themselves as well as the needs of the University, thus breaking down the isolation which is frequently the bane of Universities—a phrase used by Lord Fletcher Moulton recently, speaking of the position of the University of London.

Time has not permitted us to gather the data to lay before you the exact extent in which such action is in operation in the great Universities of the United States, but sufficient information has been obtained to warrant the general statement that over there it is almost universal, and has attained very great proportions.

The other branch of publicity is keeping the Alumni in touch with the University and maintaining their interest by more frequent and regular communications to them on its affairs. I mean not merely personal news of individuals, sports and athletics, the establishment of new departments, the erection of new buildings, but also the general development of thought around the University and such graver matters as you are now considering.

Such communications with an organized effort by the Alumni Association to foster reunions of classes at convocation or other suitable times and to hold occasional gatherings of the local Alumni in outside towns, seems to be the most effective way of eliminating a feeling which undoubtedly exists, that the University as such takes no interest in its Alumni and never approaches them except to ask for money.

Such a bureau of publicity, functioning under the supervision of the President and in close co-operation with the Alumni Association, seems to us to be a matter of the first importance. We do not suggest that your Commission should name any particular sum for its extension. That is probably a matter that can best be dealt with by the Board of Governors, but what we do ask is that among other matters you consider the suggestions now made and that if they commend themselves to you that you make such recommendations on this subject as will strengthen the hands of the President and Board of Governors in extending and developing such a bureau of publicity.

Next in the group of activities above mentioned is the Alumni Association, and I wish to say a few words in regard to it, premising that no financial support is asked beyond that which it is now receiving.

But we think it will be of value to you, in considering the third point (the file record), to know something of the past work and of the aims of our Association.

As one instance of what has been done I want to refer to the Memorial Fund. You all know the magnificent way in which the undergraduates of the University responded in the great war; many of these men were, to a large extent, dependent on their own resources in obtaining a University education. It naturally happened that many of them came back with their resources so depleted that they could not complete their course at the University without aid.

When the Dominion Government finally decided that it could not assist returned University students by giving such aid, the Alumni Association stepped in and did for these men what the Government declined to do. Notwithstanding the difficulties under which it laboured, and to which I will refer later, the Alumni Association has during the last two years secured from its own members and from the friends of the University, subscriptions aggregating not less than $336,457 for the University War Memorial Fund, and out of this sum more than $250,000 has acually been paid in.

From this fund there was, in 1919-20, lent to returned men who, without assistance, were either unable to complete their college course, or in some cases enter it, the sum of $37,462. This sum was lent to 152 students.

This year applications have been received from 215 men, and the amount asked aggregates $73,000. Up to the present time loans have been arranged aggregating $42,426 to 188 students, and some applications remain to be considered.

Of money lent last year to men who graduated last June about $2,500 is repayable this year, and of that sum $1,834 has now been repaid. All payments that have fallen due have been met usually on the very day with, I believe, one exception. This borrower expects to repay next May.

I wish that every member of your Commission could meet these men. It has been a privilege for me to do so. If time permitted I could tell you some of their stories. Not only did those boys come back; they came back with an active interest in college life on all its sides. They were enlightened by the war, but not disillusionized. They valued the poetry which they found at the University all the more on account of the hard prose which they had to study elsewhere.

If these young men are a fair sample—in moral fibre, courage and resource—of the men that this University is turning out, I for one have no pessimistic doubts about the future of this country.

When the need for these loans to returned men slackens so that the way is clear, the Physical Memorial will be built.

Its chief significance to the University will lie in its silent record of the devotion of her sons whose names are there recorded, forming an inspiration to future generations of students, and sentiment will be reinforced by the wonderful architectural charm of the memorial.

To those of us who believe with Newman that the intangible influences of a University are of even greater importance than the tangible assets, the completion of this memorial will mark an epoch in the history of the University.

That, Sir, is one thing which the Alumni Association has done. They also helped returned men by establishing an employment bureau, and they have to their credit other accomplishments even with the difficulties now standing in their way. But I shall not weary you with a reference to them, for I think the Memorial Fund by itself is sufficient to indicate the value, not alone to the University, but to the Province, of the work of this Association.

Now one word as to the ideals and future aims of the Alumni Association. In the present condition of unrest and difficulty following the great war there is, we think, a peculiar necessity in the public interest that Associations of College men throughout the Province should be developed, intensified and if possible made permanent to the end that their united and co-ordinated assistance and influence may be availed of by this Province in meeting and solving the grave problems that loom on the horizon. I refer to Associations of College men, not as segregating them from the rest of the community as a special class, but because it is in the interest of the Province to secure their more active interest and intervention in the solution of these problems; because if a college training does anything for a man, it tends to give him a developed capacity for sane thinking and sane action in such matters, and because he comes to the consideration of these questions with some knowledge of history, of the problems of the past and their attempted solution, and with a tendency to consider fairly the claims of agitators so far as they are founded on real grievances. The growth of any substantial association of such men naturally centres about the University, and can only be promoted by the development and strengthening of such an association among its Alumni.

Such associations may undoubtedly develop around each of our Universities, and, indeed, around our Colleges, but no argument is needed to establish the conclusion that by far the most effective of such associations must naturally be that which develops about the Provincial University, with 5,000 students in attendance seated in the capital of the Province and in a city that contains nearly one-fifth of its whole population, and with 6,750 Alumni in that city. The direct financial aid which the Alumni Association can at present render to the University is negligible; in fact, it is an expense, but I firmly believe that the future of the University depends in large degree on the extent to which the interest of the Alumni in the University is nurtured and developed.

Let me read you a passage from the report for 1920 of the President of Yale. After referring to the financial difficulties of the preceding year, he said:

"But neither the growth of funds nor the increase of tuition fees has been sufficient to meet the entire added expense, and had it not been for the Alumni Fund Organization, Yale would have found it hard to raise its professors' salaries without facing a deficit of between $400,000 and $500,000 on last year's current account. The response of the Alumni to our emergency call was gratifying in the extreme, and the record total of 1918-1919 which was subscribed to wipe out a war deficit was fully equalled in 1919-20. Gifts for principal amounted to $102,000; bequests, $63,000; gifts to income, $400,000; interest on principal, $70,000. Total through the Alumni for the year, $635,000. That is what the Yale Alumni Association did last year."

At Harvard University a campaign has been carried on by its graduates for several months to raise an endowment fund of ten million dollars.

In the deed of gift of this fund it is stipulated that one-fifth of the net annual income from unrestricted contributions to the fund, but not more than ten thousand dollars in each year, shall be used for the following purpose:

> "To advance the interests of the University and enable it more effectively to carry on its work by *organizing the Alumni* and keeping them closely in touch with the aims, needs and activities of the University."

We cannot yet do such things. Our Alumni are for the most part people of modest means. But who shall say what in 15 or 25 years from now will be the capacity of our Alumni for service to the University and to the country, provided only that their interest in the Association and in the University is developed and maintained, as I am sure it can be.

But as the Alumni Association is asking no increased financial assistance, you will naturally ask, "How is the duty with which this Commission is charged connected with the development of that Association or its ideals?" Briefly thus. As a foundation for the successful development and maintenance of the Alumni Association of the University as well as for the practical operation of the Publicity Bureau, there must be created, perfected and maintained a complete series of files of all the living alumni, with their correct postal addresses so arranged as a working system that the information which it contains is accurate, up-to-date and promptly available. Such a record should form a recognized bureau of the University. In a fashion such a record exists, but I am not using hyperbolic language when I say it is defective, inaccurate and inefficient for the purposes I have indicated.

In saying that I am not criticizing the past efforts of the Registrar's Office. So far as I am aware everything is done that can be done in the Registrar's Office with his present staff and facilities, but the result is none the less lamentable.

Let me give you some facts.

(*a*) Two years ago, when our Association undertook to raise a War Memorial Fund among the Alumni of the University, it was found that a correct mailing list was not available. We engaged a staff of typists and sent lists for corrections to all parts of the world where our members were resident. Many of these lists came back completely changed. Often men who were on the lists as alive had been dead for several years.

After several weeks' work and the expenditure of over $7,000, we had a list of some 18,000 supposedly correct addresses; but when we had sent out our appeals many hundreds were returned on account of incorrect addresses. This experience has been repeated on every occasion that we have sent general letters to our members.

(*b*) According to the present files there are 1,500 Alumni who are completely lost. In addition to these there are some 5,000 whose only available addresses are those which were given as home addresses when attending the University. This means that of the 25,000 living Alumni the whereabouts of at least 6,500 is unknown. The work done for the War Memorial was by no means sufficient to perfect the files, and since that work ceased it has been impossible, from lack of clerks, to keep the files up to the standard to which they were then brought. Owing to changes in address and the accumulation of clippings, the files are, I am informed, going backward, and this without fault on the part of those in charge.

So far as I have been able to ascertain there are no geographical files. I have for two years been asking for lists of our Alumni by counties, but have been unable to secure such lists. The lists by classes are defective in addresses and often in other respects. At present the lack of a complete and effective file record greatly hampers the efforts both of the Association and of the Publicity Bureau. We are of opinion that the early completion and maintenance of a complete and effective file record is an essential pre-requisite to the establishment of ready communication by the University with the Alumni, and a condition precedent to the success of the Publicity Bureau and the Alumni Association.

Let me summarize my point. The Alumni Association and the Publicity Bureau are now important adjuncts to the influence and work of the University. In future they will be even more important.

Their effectiveness depends in large degree on the facilities afforded by the University records for ready communication with every alumnus. At present these records do not afford proper facilities for communication.

To establish and maintain these facilities it is necessary in our opinion to establish and maintain a branch of the Registrar's office exclusively devoted to that work, and to the forwarding of communications to the Alumni.

Such a bureau can most effectively be established in conjunction with the Alumni Association and the Publicity Bureau, as these bureaus will naturally collaborate and will continually be of mutual assistance to each other.

To properly complete and equip such a file record and to provide the staff necessary to put and keep the records in effective condition will require not less than $10,000 per year for two or three years. When the records are in proper shape a less annual sum should suffice.

These three bureaux, viz., Publicity, the Alumni Association, and the File Records, form a special group of activities devoted not to the academic work of the University, but to spreading among the public of this Province, and more especially among its Alumni, a knowledge of its present development, its work and its needs and in developing and maintaining in both these bodies an intelligent and sympathetic interest in its affairs. That work lies at the root of future progress and development, for no matter what individual Ministers of the Crown, or even a majority of them, may know or think, they can go no further than is warranted by the sentiment of the public. To inform the public of the facts and to stimulate their interest; in other words, to break down the isolation which has been the bane of the Provincial University, is the object for which these three bureaux are necessary.

Bureau of Appointments.

In the Report of the University Commission of 1906 some reference is made to the establishment of a bureau charged with the duty of assisting undergraduates to secure employment during the vacation in cases where such employment is needed or desired.

So far as I am aware no action has been taken by the University in that regard, but the Alumni Association has done some work on that line. I attach as an appendix to this memorandum a statement regarding it which appeared last Spring in the University Monthly: "Similar bureaux have been found useful in American Universities. At Harvard University, for example, the average number of men who use the Student Employment Bureau to get work each year is over one thousand. It is estimated that more than one thousand other men find summer work or work during college terms on their own initiative. Thus more than forty per cent. of the Harvard student body is, in part at least, self-supporting." Judging from our experience at least fifty per cent. of the students attending Toronto University are self-supporting, and would appreciate the services of such a bureau. It cannot be doubted that the establishment of such a bureau would be welcomed both by undergraduates and by graduates, and we, therefore, invite your consideration of the matter.

BOARD OF GOVERNORS.

Finally, under the third clause of your Commission, we present one other matter. The Alumni recognize that it is essential that the members of the Board of Governors should be appointed by the Government of the Province, but they suggest that a certain proportion of the Board might well be appointed by the Government on the nomination of the Alumni, such nominations to result from the election of such nominees by the body of the Alumni. The great advantage to be derived from such a course of procedure would be that it would give to the Alumni a voice in the administration of the University, and would thus tend to stimulate the interest of the Alumni in its affairs. Also it would be likely to result in the appointment as Governors of men deeply interested in the affairs of the University, men able and willing to give time and effort to the duties of their position. For these reasons the Alumni trust that your Commission may see its way to approve of this suggestion and to embody in your report a recommendation accordingly.

All of which is respectfully submitted for the Alumni Association of the University of Toronto.

C. E. MASTEN,
President.
ANGUS MACMURCHY.
JOHN J. GIBSON.
JOHN R. BONE.
J. P. MCMURRICH.
D. B. GILLIES.
HELEN DAFOE.
EVELYN MCDONALD.
C. E. MACDONALD.
G. E. WILSON.
C. S. MACINNES.
W. C. JAMES.
Members, Board of Directors.

Toronto, Canada, Monday, December 6th, 1920.

A BUREAU OF APPOINTMENTS FOR THE UNIVERSITY.

(*Extract from the University of Toronto Monthly.*)

In February, 1919, the Alumni Bureau of Appointments was organized to assist demobilized graduates and undergraduates in securing suitable employment. The Bureau operated for four months and was then discontinued, as the urgency of the original need had ceased and as the Alumni office did not have sufficient staff to carry on the work. The Bureau, however, was established again this spring as an emergency measure to assist returned soldier-students, many of whom have already received assistance from the Alumni Scholarship Board in securing lucrative employment for the summer months. The final statistics of this work are not available, but it is estimated that approximately 150 students will secure work through the medium of the Bureau.

The Alumni Board of Directors has considered the establishment of a bureau of appointments which would concern itself not only with returned soldiers, but with all graduates and undergraduates of the University who wish assistance in securing employment. The great difficulty in the way of organizing such a bureau under the Alumni is lack of funds.

To administer a bureau of appointments satisfactorily calls for a degree of system and attention to detail that is surprising to anyone not familiar with the work. Applicants must be enrolled, correspondence carried on, with a number of references for each candidate, all material must be indexed so as to be ready for easy manipulation, one or more personal conferences must be held with each applicant, and reports and records must be compiled. Over and above all this, an organization must be set up which will bring to the office immediate information of employment openings. All of which means that a considerable staff is necessary to carry on the work.

A comprehensive University Bureau of Appointments would, however, fully repay in service the financial outlay involved. Its work would have many ramifications, but would probably be centred in the following activities:

1. Collecting data on professional and business opportunities which would serve as a vocational guide to undergraduates, providing them with a ready means of ascertaining the needs and advantages of the various callings and occupations.

2. Assisting graduates in securing employment suited to their inclinations and training.

3. Assisting undergraduates in securing vacation employment and part-time employment during the academic year in cases where financial conditions demand it.

The question of how a University Employment Bureau should be maintained and under whose supervision it should operate is an open one. In practically all of the large Universities of Great Britain and the United States bureaux are maintained by the Universities themselves. In some cases, as in the case of Harvard, the Alumni Association co-operates with the University in carrying on the work. In a few isolated cases bureaux are maintained independently by Alumni Associations. The bureau at McGill University is an example of this latter.

An appointment bureau under an Alumni Association possesses one great advantage, namely, that through local Alumni committees and individual Alumni many employment openings may be secured. On the other hand, it may be fairly argued that the final responsibility for a bureau of appointments rests with the University itself. The first duty of a University is to provide means of education through courses of instruction; but a further obligation rests upon her—the obligation to aid those who have received her instruction in securing positions in which their training will be of the greatest value to themselves and the State.

There is a movement to-day among the University men and women of Canada toward a wider field of activity. University-trained citizens are playing a greater part in the nation's affairs than ever before. In furthering this movement a well-organized University Bureau of Appointments would not only be of great service to the individuals concerned, but would be a national asset as well.

MR. CHAIRMAN, MEMBERS OF THE COMMISSION:

The Alumnae Association of University College begs to place before the Commission certain facts regarding the conditions under which women are attending University College.

As you, Mr. Chairman, of course know, University College is the successor to the University of King's College, in its origin an Anglican denominational foundation, but completely secularized by Act of the Provincial Legislature in 1849, and since then dependent, except for students' fees, upon the state for maintenance. University College, as the Faculty of Arts of the University, was originally the whole University and received the whole of the financial aid granted by the state. Gradually, however, with the expansion of the University, the College has become only part of a great whole, and now receives only 8½ per cent. of the funds expended by the Board of Governors. University College is, therefore, the special charge of the Provincial Government, and there is no other body but the Board of Governors responsible for caring for her financially, and she finds herself to-day in the position of a very shabbily treated step-child. This is apparently inevitable, as the Board of Governors have the full responsibility of the whole University, and the part has been swallowed up in the whole.

Now, gentlemen, bad as we all know the general situation to be in University College, the present conditions are specially hard on the women. The College was planned for men only, women were subsequently allowed to slip in, and now constitute practically half the enrolment in the College. For them no proper facilities have ever been provided, anything that is done being always in the nature of a makeshift, and we submit that the time has now come when this policy should be abandoned and the policy adopted of women's residential and recreational buildings for women students. The policy of makeshifts has, of course, resulted in entirely inadequate accommodation and equipment for the proper cultural development of the women while in College, and to this, sir, I believe that the authorities of the University will assent almost as readily as the undergraduates themselves.

You, gentlemen, are no doubt aware that there is a very rapidly increasing tendency among women of all classes in the Province to seek a means of earning their livelihood, and to this end a University education is deemed important, if not essential. As one of the applicants at the residence this autumn put it: "A girl can't do very much to-day without a university education." Now, too, the Department of Education insists that all High School teachers shall be University graduates, thus not only raising the standard, but again increasing the number who will be coming up to College, whereas the increasingly bad living conditions are undoubtedly reducing the standard of an all-round education which the College is able to offer.

There are at present 492 women students enrolled in University College. Of these 250 come from outside Toronto. Of these again 150 are accommodated in the five houses belonging to the University, and 100 in boarding and lodging houses.

In this connection we wish to point out that at St. Hilda's College all students whose homes are not in the city must live in residence, eliminating for them the distressing boarding house problem; and Victoria College is aiming at the same condition, the authorities of the College considering it of sufficient importance to make a point of accommodating all their women students in College buildings as soon as possible.

Thus, gentlemen, the denominational colleges provide infinitely better accommodation for their women students than the State College. We should also like to point out, sir, that all the residential accommodation provided thus far for University College women has been obtained by pressure brought to bear by the Alumnae of the College.

Your petitioners have drawn up a certain minimum standard of living, which is as follows:—

1. Room and board in the same house or in close proximity.
2. Preferably one, and not more than two, students in one room.
3. Furniture: Single beds, study table, chair, good desk light.
4. Bathroom accommodation: Not more than five women to one bathroom.
5. The student should not be preparing her meals in her own room.
6. The student should not be living in a house where men live either as boarders or members of the family.
7. The student should have sitting-room accommodation for receiving visitors.

We have ascertained that this minimum accommodation with meals cannot be obtained in Toronto, near the University, for less than $9.50 a week, the price charged by the University.

The figures which we are using to show under what conditions the women are actually living have been ascertained through a questionnaire sent out to those living in boarding or rooming houses this term. They show that in one respect or another most of these students are living below our minimum standard. To take the points in order:—

1. 26 per cent. have their meals and room in the same house; 74 per cent. have not their meals and room in the same house.

2 and 3. 32 per cent. live in single rooms, 57 per cent. in double rooms, 11 per cent. three in one room and 51 per cent. in double beds. In addition there are 45 of the 150 women in residence living three in one room.

4. With regard to bathrooms. I beg to refer you to Appendix B, but I wish to call your attention to the fact that the bathrooms here referred to have almost always the three fixtures in one room, and that only 9 per cent. of the women have washstands in their rooms. Also, that in boarding houses all the people in the house have to be ready for breakfast at the same time, creating a situation described by one of the students as follows: "I felt myself lucky if I could get one hot bath a week. In no one boarding house was there more than one wash-basin or bath. This, coupled with the fact that there were anywhere from fifteen to twenty roomers, made it difficult to wash properly in the morning, or indeed at any other time."

5. A few students are preparing their meals in their own rooms.

6. Forty-six per cent. are living in houses where the sexes are mixed. The objection to this is illustrated by the following incident: This term a group of undergraduates took rooms together in one boarding house, taking the precaution of renting the parlor also, and believing that they had thus secured the whole house. One evening they required a knife from the dining-room. One girl went down to get it, and was just about to turn on the light when an unusual sound made her look round, and by the light from the hall she could see that a man was sleeping on a cot in the room. This and other improper conditions led to the whole group being obliged to move from the house.

7. Sitting-rooms. In 42 per cent. of cases there are no sitting-rooms, and in 58 per cent. the use of the sitting-room is allowed, but often with great restrictions, the result being that it is becoming an all too frequent habit for the women to receive men visitors in their bedrooms—a matter of very grave concern to those in charge of the women and, I may add also, to the members of the staff in the University. See Appendix A.

Your petitioners consider that with students in rooms one of the most serious aspects develops in the event of illness. Last year one student died whose life might have been saved if she had gone to bed sooner and not been obliged to go out for meals. One student was left for twenty-four hours without food or attention before her friends found her. On one occasion, when the head of the Women's Union went to see her, she found the girl lying in bed and a male undergraduate making up her fire, he having been commissioned to do so by the landlady.

Cleanliness is another very difficult point. Clean linen is very often difficult to get, and two different groups of students have had to leave houses on account of vermin.

The moral aspect of the rooming house problem is the most serious one. We have touched on it already under several headings, the greatest danger being in mixed rooming houses and in places where the students have no sitting-room. An occurrence in a mixed rooming house may be cited: A student said that her landlady went away for one week-end, leaving men roomers on the first floor and women roomers on the second. The men turned the girls' beds upside down, hid their things and greased the banisters. This seems like a frivolous episode at first sight, but one can readily see where such things might lead, and we feel that the Government is taking upon itself a very heavy responsibility in allowing the possibility of such a state of affairs to continue.

We have shown, Mr. Chairman, that the accommodation available near the University is very undesirable for the women students, but, bad as it is, it is becoming each year increasingly difficult to find at all. Several cases have come to our knowledge of women desiring to enter University College who have had to give up the University altogether, or who have gone to other colleges on account of their inability to obtain proper living quarters near the University. This is partly due to the inroad of the foreign population into the district, which was formerly of a very high character. Great overcrowding and lack of cleanliness are one of the results of this development and a general lowering of the tone of the district. Five times in two months examples of indecent behaviour and attempted assault have been reported to the police. Last year a student took rooms in a house on Huron Street, near Bloor, which turned out to be a house of ill-fame and was reported to the police. In fact, to quote a fourth-year student: "Living in a rooming house is a miserable existence."

We consider, Sir, that even for women living in residence the conditions are highly unfavourable to their proper development for going out through the Province to help shape its future. They are living in houses scattered all over the University property, and there is no possibility of a corporate life or the formation of an *esprit de corps* among the women. The various sections have this spirit, but it merely tends to break up the College life and make factions, instead of blending them into a unified body. This has always been felt as a serious disadvantage to University College in inter-college contests, whether on the athletic field or in the debating society. There is no meeting place for the 492 women now in college. The University College Women's Union, which is the only place where meetings can be held, is very greatly overcrowded. Yet, there being no place at all where mixed organizations such as a year executive or departmental societies can meet in the College, the Union must needs open its doors to these also.

The women have, as a rule, no place for study outside their bedrooms, and in four out of five of the residences there is no dining-room, and the students have to go to another building for their meals. This is particularly serious in the case of 100 Queen's Park, as the students must cross the park at night in order to reach the Union.

The needs we have enumerated, Mr. Chairman, are so striking that those cognizant of conditions, the women graduates and undergraduates, took the matter up and concluded that the only solution for this state of affairs lay in new buildings. On the assurance of the Board of Governors that though the need was very apparent there were no funds which could immediately be applied for this purpose, the women graduates of the College inaugurated a movement to secure funds, and have themselves subscribed in the past six months $25,000, the undergraduates contributing $6,000 of this amount, and we hope for a much larger amount before the fund is closed. And, Mr. Chairman, if, as Judge Masten has just said, the alumni are of moderate means, the alumnae may be called poor.

Owing to the general financial depression the appeal to the public, upon which we depended for the major portion of the amount necessary, has had to be indefinitely postponed. We therefore appeal very strongly to the Government of the Province that they consider at the earliest possible moment providing the buildings necessary for the proper accommodation of the women in University College.

All of which is respectfully submitted.

EDITH E. HENDERSON,
Chairman of the Buildings Committee.

EVELYN MCDONALD,
President, University College
Alumnae Association.

APPENDIX III

STATEMENT OF UNIVERSITY COLLEGE ALUMNAE ASSOCIATION, UNIVERSITY OF TORONTO

Appendix A.

Report re Rooming Houses, University College.

1. 1920-21. Total number of women in College, 492; total number of women living at home, 242; total number of women in residence, 150; total number of women in rooms, 100.

2. *Not a good district for rooms.* (*a*) Crowded. (*b*) It is never safe to look for rooms south of College Street. (*c*) Have reported to the police indecent behaviour and attempted assault to women students by men in Park, St. George Street, etc., five times in two months. There are other cases not reported. This shows the danger of going to their rooms from dinner. (*d*) 1919-20 one woman student took a room in a house in Huron Street, near Bloor Street. The house was found to be a house of ill-fame and was reported to the police.

3. *Cleanliness Difficult.* (*a*) 1919-21, two cases of groups of students having to leave houses because of vermin. (*b*) Scarcity of bathrooms; see table, Appendix B. (*c*) Hot water; see Appendix B.

4. *Sex of Roomers.* Seventy-eight reported—42 female only, 38 mixed. This in houses without proper sitting-room accommodation and without adequate number of bathrooms. A complaint has been made already this term about women students entertaining men in bedrooms. One student said that the men rooming in her house were very thoughtful, because they whistled when they came upstairs past the bathroom door.

5. *Crowding in Rooms.* (*a*) In 80 students' rooms there are 41 double beds and 39 single, therefore the standard is very bad. There are 26 single and 46 double rooms in 81 houses, and nine where three are living in one room. In the University College residences there are 14 rooms with three students—a very bad standard especially in residence. Many students never have the opportunity of being alone. (*b*) Illness, crowding in the rooms and no meals in the majority of houses make a serious problem. The crowding in rooms becomes an actual menace during anything resembling an epidemic, as it is almost impossible to prevent the disease from spreading to all occupants.

6. *Constant Moving.* Eighteen moved from one to five times in first two months of this term. In four years one student moved ten times, one moved five times. It is very seldom that a student is in the same room for two years running.

Extracts from questionnaires: "Living in rooms is unsatisfactory and unhealthy": "very inconvenient to room and board in different places"; "very difficult to get rooms." A student in the fourth year writes: "Living in an ordinary rooming house is a miserable existence."

Present conditions are injurious to health, decent standards and sound education. We believe it would be more in the interests of the whole Province that these students should not come to College at all than live as many of them are doing.

Appendix B.

Single Rooms.	Double Rooms.	Three in Room.	Total.
26=32%.	46=57%.	9=11%.	81 Houses.

Beds.

Single.	Double.	Total.
39=49%.	41=51%.	80 Houses.

Sitting-room Accommodation.

(Often Restricted Use.)	None.	Total.
45=58%.	32=42%.	77 Houses.

Sex of Roomers.

Female Only.	Mixed.	Total.
42=54%.	36=46%.	78 Houses.

Meals.

Meals in same house as Rooms.	In another House.	Total.
21=26%.	59=74%.	80 Houses.

Bathrooms. 71 reports.

Houses.	People.	Baths.	Houses	People.	Baths.
15=21%	39	19	56=79%	244	65
=5 people or less to one bath.			=more than 5 to one bath.		

Houses.	People.	Baths.	Houses	People.	Baths.
44=62%	139	53	27=17%	144	30
=8 people or less to one bath.			=over 8 people to one bath.		

Washstands in Rooms. 65 Houses.

With Washstands in Rooms.	*No Washstands.*
6=9%	91%

Hot Water.

Good, 38%; fair, 32%; poor, 16%; available only when ordered, 14%.

APPENDIX IV

STATEMENT OF ENGINEERING ALUMNI ASSOCIATION, UNIVERSITY OF TORONTO

TORONTO, December 6th, 1920.

DR. H. J. CODY,

Chairman, Ontario Royal Commission on University Affairs, Toronto, Ontario.

HONOURABLE SIR,—The Engineering Alumni Association of the Faculty of Applied Science and Engineering of the University of Toronto desires to place before you some of its views and certain recommendations, believing these will be of interest to you at this time.

ORGANIZATION—THE ENGINEERING ALUMNI ASSOCIATION.

That you may be informed in regard to the Association which is now addressing you, we would advise that it includes not only the two thousand (approximately) graduates of the "School," but all others who have completed at least two years at the "School," and whose year has been graduated. It has been impossible, of course, to communicate with this large number of men, but the statements which we are herein making have been discussed by the Council of the Association and are given to you as their well-considered opinions.

That you may further understand the calibre of the members of our Association, we would advise you that they have occupied, and do occupy many very responsible positions. A very partial list is given in "Schedule A" appended hereto.

That you may still further understand the composition of our Association, we would refer to the geographical distribution of the two thousand men who have passed through the "School." This distribution is shown in graph appended, marked "Schedule C." Worked out in percentages it shows that of the nineteen hundred and seventy-six men who are still living, 89% are resident in Canada, 73% are resident in Ontario, and over 35% are resident in Toronto.

A third graph, marked "Schedule D," shows the percentage of graduates of the "School" employed in various years in Canada. The graph illustrates very definitely the fact that Canada has always absorbed the majority of our members, and that that absorption is at a maximum to-day. These schedules show very conclusively that the large majority of the men trained in the "School" are applying their training in Canada, and particularly in Ontario and Toronto. We believe, consequently, that you will be interested in having their viewpoint laid before you.

BRANCHES.

Branches of the Association have for some time been established in Toronto, Montreal, Ottawa and on the Pacific Coast; one has recently been organized in Sudbury, and it is expected that branches will shortly be established in the districts centreing around Hamilton, Niagara, Windsor, Winnipeg, Regina, Calgary, Edmonton, New York, Pittsburgh and Chicago.

AIMS AND OBJECTS.

The aims and objects of this Association are to promote the continued welfare of the Faculty of Applied Science and Engineering and of the University, and to be in active co-operation with them; to stimulate education generally and engineering education in particular, and to develop and maintain in our membership high ideals of professional honour and citizenship.

Buildings and Equipment.

The "School" is, we believe, recognized as the Provincial institution of engineering learning. To maintain it in the premier position which it has and must occupy, it will be necessary that large capital expenditures be made in the not distant future for new buildings and equipment, and provision should be made shortly to replace the old "School" by a modern structure.

Salaries.

While the physical side of this subject is most important and must certainly be properly taken care of if satisfactory results are to obtain, it is still more important that the personnel of the teaching staff of the Faculty should be maintained at the highest possible standard. The Faculty has been fortunate in drawing to it men of outstanding ability and character, but it cannot, we believe, hope to retain this type unless adequate remuneration is provided. At the present time it is unquestionably a fact, due in some measure to the unusual economic conditions which have prevailed during the past few years, although not entirely, that our scale of salaries is low, so that in a large measure the personnel of the staff could obtain considerably larger compensation in industrial or commercial work. We trust, therefore, that this very important matter will receive at your hands the consideration and sympathy which it requires.

Cost of Training Engineers Warranted.

We realize that the cost of training Engineers is relatively high compared with the cost in some of the other Faculties, but we submit that in the same degree that the recent Great War was termed an "An Engineer's War," we are now involved in an Engineer's peace. In this great country, with its vast natural resources, which form the very basis of our prosperity, the Engineer is essential for their development, and whatever moneys have to be spent on their education will be repaid abundantly.

Board of Governors.

No body of men is more interested in our University than those belonging to this Association, nor, we believe, is any group of men better qualified to assist in solving University problems. We believe, therefore, that it would be an advantage to the University if our Association could be represented on the Board of Governors. Such a representative, we believe, would be invaluable where matters pertaining to housing, equipment and staff are being considered.

Senate.

Under the present University Act the Faculty of Applied Science and Engineering is limited to two members on the Senate. We believe that this should be increased to four at least, and we ask your consideration of this suggestion.

Faculty Council.

We also believe that we could be of direct benefit to the Faculty if a closer co-operation were maintained between the Faculty Council and our Association, and we would suggest that consideration be given to this matter.

Research.

We have mentioned that engineering is playing, and must continue to play, an even greater part in the vigorous life of this great country. Engineers are being employed in industrial activities in ever-increasing numbers, and research work is being developed very rapidly. In order to maintain our position in the country's affairs and to work out our proper destiny, more adequate facilities should be provided at the "School" for this important work.

Diploma Men.

It has, unfortunately, long been a cause of considerable feeling that men who have completed the regular three-year course at the "School" have not been given the standing of graduates of the University. These men took the regular course in force at the time they passed through the "School," and many of them are now occupying very high positions. We would earnestly ask that degree standing be accorded these men, and that they be added to the roll of the Alumni of the University of Toronto.

In conclusion, we would assure you of our very deep interest in all matters affecting the University of Toronto, and particularly the Faculty of Applied Science and Engineering, and therefore hope that you may find it possible to concur in the views which we have set forth.

Yours respectfully,

COUNCIL OF THE ENGINEERING ALUMNI ASSOCIATION,

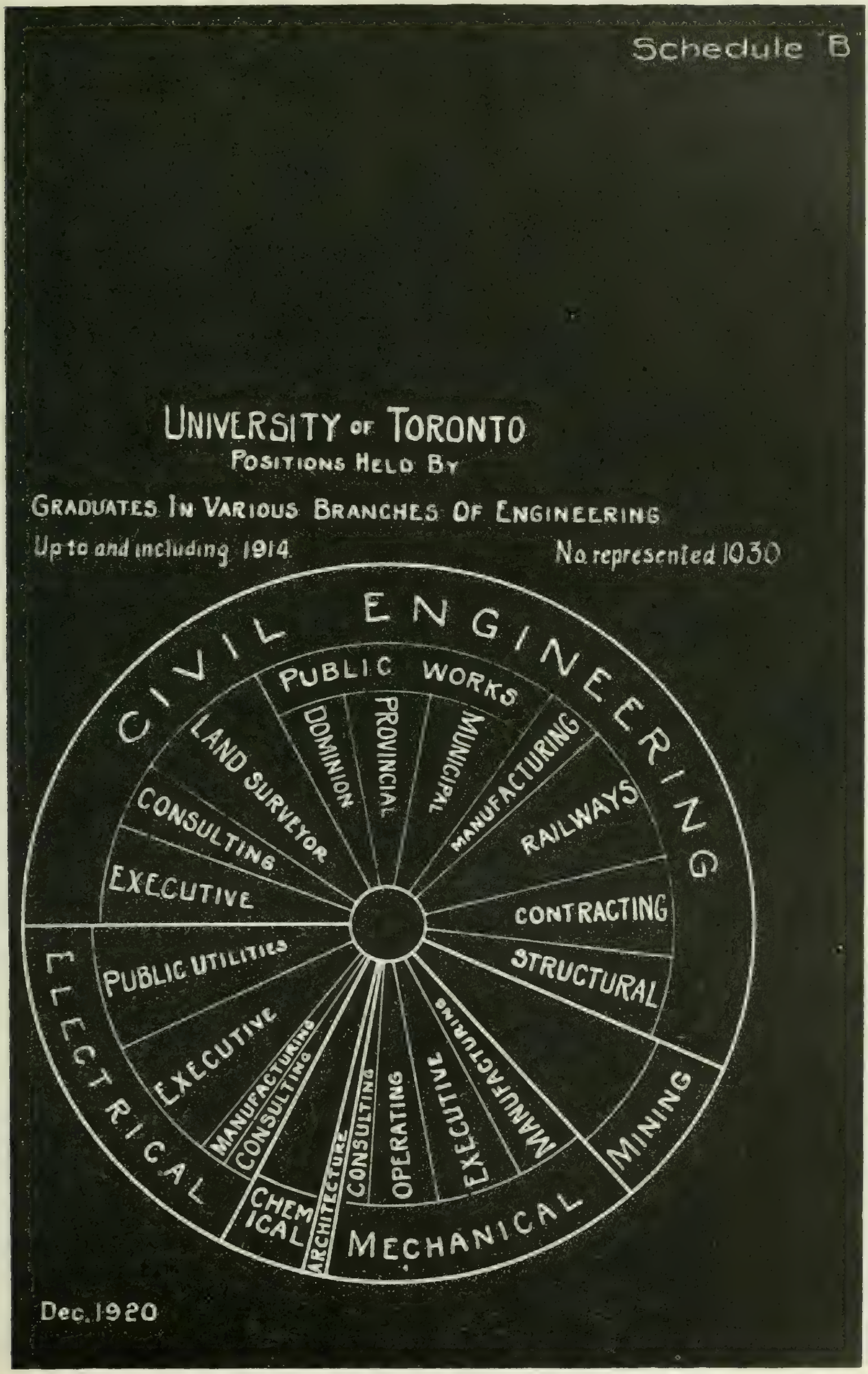
Wm. A. Bucke,
1st Vice-President.
C. E. Macdonald,
Secretary.

Schedule "A."

Chief Engineer, Canadian Pacific Railway. (This is the second time this very important position has been held by one of our members.)

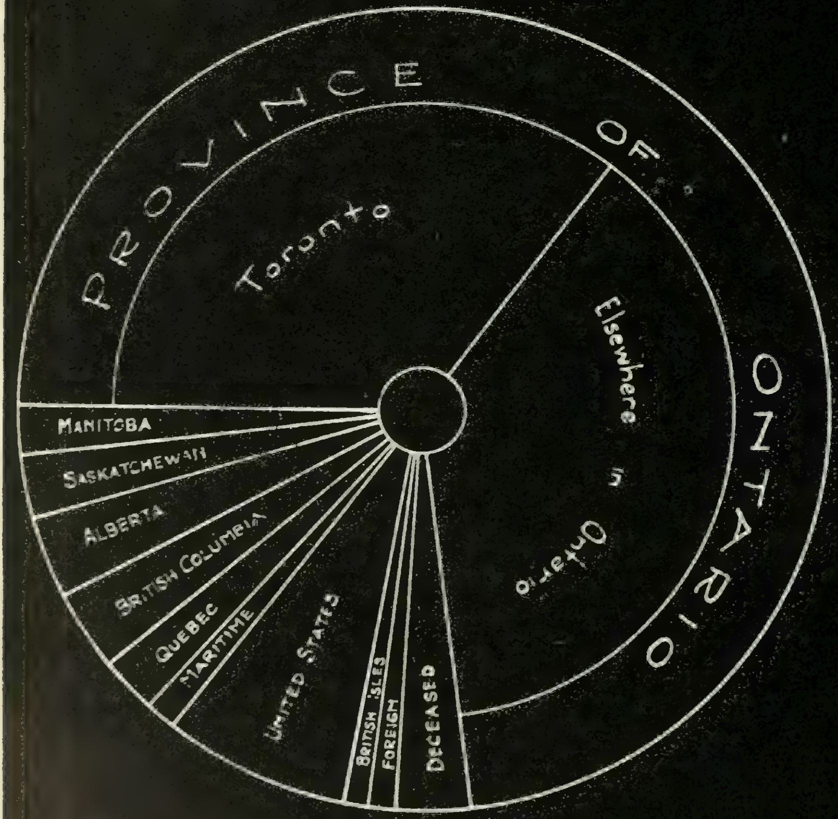
Chief Engineer, Nova Scotia Power Commission.
Vice-President and Chief Engineer, Dominion Bridge Company.
Commissioner for Montreal.
President, Manitoba Bridge and Iron Works.
Assistant to President, International Nickel Company of Canada. (Formerly Chief Engineer.)
President, Manitoba Steel and Iron Company.
General Manager and Chief Engineer, Toronto Harbour Commission.
Chief Engineer, Bell Telephone Company of Canada.
Deputy Minister of Public Works, Alberta.
Director of Water Powers Branch, Department of Interior.
Metallurgical Engineer, National Tube Company.
Chief Engineer, Hydro-Electric Power Commission of Ontario.
Electrical Engineer, Hydro-Electric Power Commission of Ontario.
Hydraulic Engineer, Hydro-Electric Power Commission of Ontario.

In addition to the above, there are a large number of prominent Consulting Engineers, Chief Engineers, Assistant Engineers and Executives. That you may have a quick view of the distribution of our members in reference to the positions held by them, we append a graph marked "Schedule B." This graph was made up for the year 1914. Time has not permitted bringing it up to date, but it may be considered, we believe, representative of present-day conditions.


Schedule "B"
UNIVERSITY OF TORONTO
POSITIONS HELD BY
GRADUATES IN VARIOUS BRANCHES OF ENGINEERING
Up to and including 1914
No. represented 1030
CIVIL ENGINEERING
PUBLIC WORKS
DOMINION
PROVINCIAL
MUNICIPAL
LAND SURVEYOR
CONSULTING
EXECUTIVE
MANUFACTURING
RAILWAYS
CONTRACTING
STRUCTURAL
MINING
ELECTRICAL
PUBLIC UTILITIES
EXECUTIVE
MANUFACTURING
CONSULTING
CHEMICAL
ARCHITECTURE
MECHANICAL
CONSULTING
OPERATING
EXECUTIVE
MANUFACTURING
Dec. 1920

Schedule "C"

UNIVERSITY OF TORONTO
DISTRIBUTION OF
GRADUATES IN ENGINEERING
In Year 1920
Number Represented 2040



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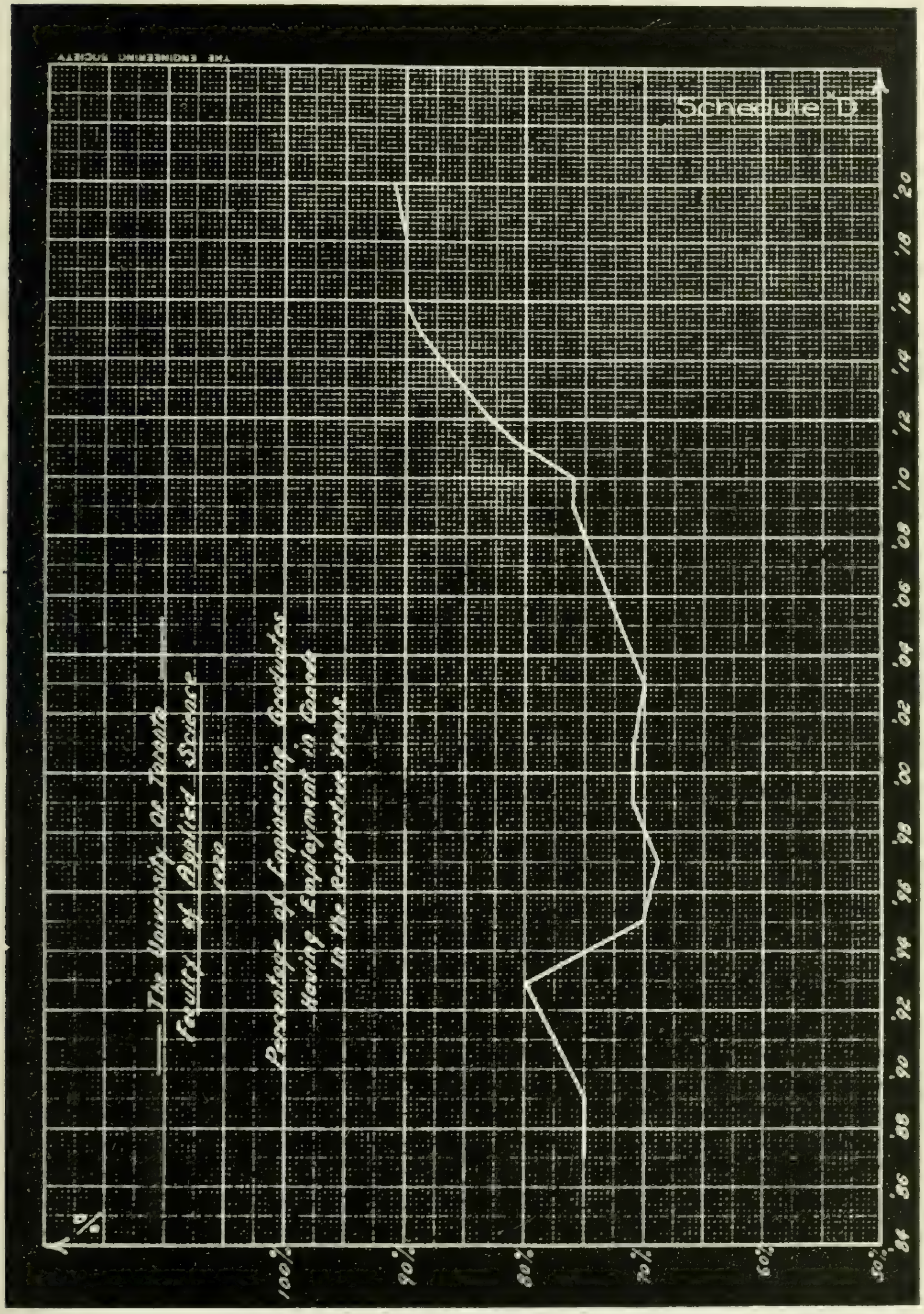

Schedule "D"
The University of Toronto
Faculty of Applied Science
1920
Percentage of Engineering Graduates
Having Employment in Canada
In the Respective Years
%
100%
90%
80%
70%
60%
50%
'84
'86
'88
'90
'92
'94
'96
'98
'00
'02
'04
'06
'08
'10
'12
'14
'16
'18
'20
THE ENGINEERING SOCIETY

APPENDIX V

STATEMENT OF PROFESSOR ALEXANDER

MEMORANDUM.

1. As the result of a number of informal meetings and discussions several members of the teaching staff in the University of Toronto desire to emphasize certain aspects of academic work to which the Commission may not have given the attention that their importance justifies.

2. The most important point for the welfare of the University as a whole is the provision of a staff adequate to the demands.

(*a*) The demands made upon individual teachers at present are abnormal, in that the junior men do not get opportunities to develop into teachers equipped for the higher positions; that the senior men are heavily handicapped by the amount of elementary work they must undertake, and that in all grades there is an increasing lack of opportunity to give individual students an adequate amount of personal attention.

(*b*) The development of research work in its relation to graduate instruction is intimately connected with the points raised in the preceding paragraph. At present such research work cannot be adequately done. Graduate work should, as a rule, be intimately associated with the regular work of teaching, therefore development of the former necessitates further increase in the teaching staff. No instructor should be required to give more than a limited number of hours to class teaching, or to instructing individually more than a limited number of students.

(*c*) Securing a staff is inevitably connected with the question of remuneration and conditions of work. Where the salary is adequate, the conditions in this University are usually such as to prevent it from getting the best men. Junior men, being overloaded with routine work, cannot successfully show their fitness for promotion. If they are continued as mere instructors till their length of service gives them a claim to promotion, the conditions of that service prevent them from showing, by literary or scientific production, whether they will ultimately be fit for the higher positions. The persistence of these conditions will ultimately cause insuperable difficulties, as it leaves the University with a supply of teachers who must be superseded when making appointments to the highest posts.

(*d*) The most serious problem confronting Universities to-day is to find suitable instructors. This difficulty arises because the University has to compete with the attractions of non-academic employments in this country, and even when the field is extended to other countries the problem remains very acute. The close relation in this matter of appointments between Canada, Great Britain and the United States makes the question of salary almost an international one, both as regards attracting men from elsewhere or retaining those engaged in this type of work. In all countries it is becoming increasingly difficult to persuade those University graduates who are best fitted for the work to enter on academic careers, because the financial return is not sufficient.

APPENDIX VI

REPORT OF TRUSTEES OF QUEEN'S UNIVERSITY

I. General Grounds on which assistance is urged, from private and public sources, for the Universities of Ontario.

(*a*) *From the national point of view the importance of university work is becoming more and more manifest.*

The field of knowledge is extending in every direction. In science the trained man is required, whether it be to discover the riches of the mineral wealth of Canada or to improve and develop the methods of industry. The health of the people, which is the most valuable of all forms of wealth, is dependent to a large extent on the discoveries and application of preventive medicine. More and more important becomes the systematic study of the economic problems which beset us. Our great war debt, the intensity of national competition, the urgency of new social difficulties, and the new place and the new responsibilities that Canada is assuming in the world, compel us to make the most of our human and material resources. We have no longer half an unmortgaged continent to play with. Behind all these specialized forms of study there is the search after knowledge where the end sought is simply the extension of the kingdom of learning in the confidence that each new fact will in the long run increase the power of man.

(*b*) *Increase in number of students and range of activities.*

The tendency toward increase in numbers was plain enough before the war, but since the war the rush into the universities has constituted a veritable problem. In the Province of Ontario the number of candidates for matriculation was, in 1918, 2,516; in 1919, 4,146; in 1920, 5,291. In three years the number of candidates has more than doubled. The similar experience of the United Kingdom and the United States shows that this is not an isolated or temporary development. The increase in attendance at secondary schools is part of the same movement. The growing demand of the community for a wider range of activity upon the part of the universities, with the increased readiness of the universities to respond to these demands, is another factor making for permanent increase in number. The recent action of the Province of Ontario, in conformity with progressive legislation elsewhere, in raising gradually the age of compulsory school attendance to sixteen, will probably still further increase university numbers by bringing a larger number of boys and girls to the standards required for entrance.

(*c*) *Inadequacy of existing university resources.*

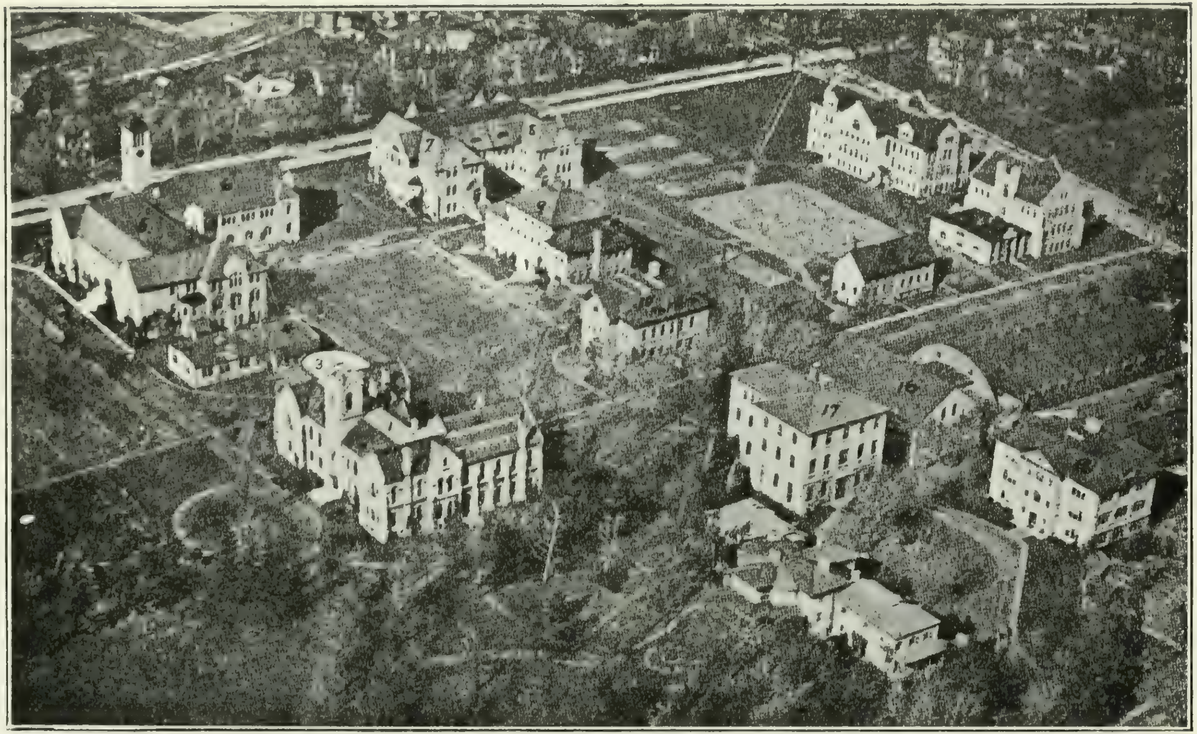
It is unfortunate that this great increase in the number of those anxious to have university training should have coincided with the period of great rise in prices. The cost of administration has increased enormously. Revenues from fees, endowment or public grants go only half as far in providing the buildings or the equipment needed, and do not permit adequate payment for instruction.

(*d*) *The interests of higher education and of primary and secondary education are vitally interdependent.*

The interests of the universities and of the schools are largely identical. The universities cannot work effectively unless their students have been well trained in the schools, and the effectiveness of the schools depends in large part on the quality and training of the university graduates who staff them or train their teachers, and on the success of the universities in helping to maintain ideals and an atmosphere favourable to education.

(*e*) *Public recognition of the need of higher education.*

There is perhaps no more significant indication of the recognition of these needs than the fact that the returned men, acting through the Advisory Committee to the Repatriation Committee of the Dominion Cabinet, urged upon that government, as the fundamental and most essential policy in reconstruction, a courageous and liberal policy of Government aid to education, and particularly higher education. At their instance a conference of the Universities of Canada was called, and met in Ottawa in 1919 This action was strongly endorsed by the Trades and Labour Congress.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7
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17
16

II. Grounds for considering that a large proportion of this support should come from public sources, and in particular why more aid is sought from the Province of Ontario.

(*a*) *Private resources no longer suffice; the task is greater and increased taxation limits private liberality.*

Appendix III in this statement will show the large extent to which the endowment of Queen's has been derived from private sources. For the first sixty years of its history the University existed and made itself a power through the liberality of individuals and of the Presbyterian community in Canada in general. But the University has never had behind it any wealthy constituency. The recent effort on behalf of McGill shows what may be done by a great university in a rich city which is the centre of the operation of large business corporations of national scope; but even McGill has found it necessary to secure $1,000,000 from the Province of Quebec towards its endowment fund, as well as an annual grant. Queen's has never had such a community to appeal to. Its wealth has been drawn from a multitude of subscribers of small sums; many a ten-dollar or a hundred-dollar subscription has represented a real but an ungrudged sacrifice. Incidentally it has often given the giver a new interest in Queen's, as with the Glengarry father who counselled his freshman son: "Now see that you get good value for that ten dollars that Principal Grant got out of me for Queen's." A succession of endowment efforts has done much to knit together her graduate body in a loyalty which is wonderful, but an examination of any such subscription list will show that the assistance has come largely from professional people whose means have been limited. The task of university education has grown beyond the power of such a constituency to bear alone. And as for the men of large fortunes, the increase of taxation, both on income and on inheritance, is certain to have an effect, and not least a psychological effect, on their readiness to devote to higher education a proportion of the margin which hitherto was available for public purposes. The State now takes wealth which private liberality formerly dispensed, and consequently the University must look to the Government in an increasing degree for aid. In England, even Oxford and Cambridge, which have hitherto received no direct State aid, are now compelled to look to the Government for assistance.

We do not mean to say that universities should or are likely to slacken in the endeavor to secure needed funds from private sources. Unless their work was such as to receive such practical endorsement from the general public, they would have no right to seek Government aid. So far as Queen's is concerned, and doubtless all the other universities of Ontario, private and local aid will continue to be sought, and the revenues from fees and from endowment must continue to meet a large part of our expenditure.

(*b*) *Every progressive country is spending an increased amount on education.*

Everywhere, at least in all English-speaking countries, the same factors are at work—increased range of school and university activities, increased numbers of students, lengthened period of attendance, higher standards of instruction, higher costs of building and maintenance, and with these factors, a growing public conviction that the meeting of these needs is the most indispensable and the most fruitful of government activities. It is, therefore, not surprising to find the public outlays upon education increasing with great rapidity.*

(*) INCREASE IN PUBLIC EXPENDITURE UPON EDUCATION.

Canada—	1901	1914	1918	1920
Total public expenditure on all forms of education	$11,751,625	$49,246,320	$61,533,520	....
England and Wales (*London Times*, July 29, 1920). (Elementary, secondary and special)—				
Board of Education	£9,744,208	£15,245,621	....	£45,755,567
Local rates	....	14,860,000	....	31,716,717
Total		£30,105,621		£77,472,284
Total expected in "normal year"				£100,000,000

United States (Report of U.S. Commissioner of Education).

	Public Elementary and Secondary Schools.	All Normal Schools.	All Colleges and Universities.
1870	$63,000,000	$202,000	$5,000,000
1880	78,000,000	873,000	6,000,000
1890	141,000,000	2,466,000	10,802,000
1900	215,000,000	4,518,000	24,000,000
1910	426,000,000	14,000,000	78,000,000
1915	605,000,000	15,885,000	101,000,000
1920	1,015,000,000	27,000,000	182,000,000

(*c*) *Even so, the expenditure on education is not great as compared with the resources of the people; it is not so great as the expenditure for less essential purposes, and it does not form so large a proportion of the total federal, provincial and municipal expenditure as it did a decade ago.*

(i) The United States Commissioner of Education estimated in 1913-14 that the United States public bill for education was—
  a little less than the value of the wheat crop,
  a little more than the value of the cotton crop,
  less than half the value of the corn crop.
According to figures given in the Canada Year Book, the Canadian public bill for education in 1914 was—
  a little more than one-third the value of the oats or hay crop,
  a little more than one-fourth the value of the wheat crop.
While in 1918 it was—
  less than one-fifth the value of the oats crop,
  less than one-fourth the value of the hay crop,
  less than one-sixth the value of the wheat crop,
  practically equal to the value of the (1917) production of pulp and paper.
In 1918 the total cost of maintaining the universities of Canada (from fees, endowments, private gifts and State aid) was—
  less than one-twelfth the value of the turnip crop.

(ii) The public expenditure on education in Canada, the United States and the United Kingdom has been, and possibly is still, only a small fraction of the liquor bill. On this continent it is probably not much greater than the expenditure on moving picture shows. Canada's expenditure on higher education in 1919 was only one-third the value of the silks imported in that year. The sum required to build a single post-Jutland battleship, which must be scrapped in twenty years, would endow and maintain forever six Universities like the Queen's of to-day.

(iii) Obviously it has not been education, but war and preparation for war, and other activities of the national or federal governments of these countries, which have chiefly swelled the taxpayer's bills. In the federal budget of the United States for the current year ninety-three cents out of every dollar are spent for past and future wars. In both Canada and the United States the proportion which expenditures for education bear to total national, provincial or state, and municipal expenditures, is not now much more than half what it was in pre-war days.

(*d*) *Ontario, though rightly considered one of the wealthiest and most progressive communities on this continent, has not kept pace with comparable states to the south in its provision* (i) *for education in general,* (ii) *for higher education.*

Comparing all Canada with the whole United States, we find that in 1914 the expenditure on higher education in the United States was 13.6 of the total expenditure for education, while in 1918 the total expenditure in Canada on universities was 7 per cent. of the total, and, including agricultural and theological colleges, 10 per cent.

Considering only provincial or state expenditure, we find that the Province of Ontario spent for education altogether in the fiscal year 1918:

less per capita than the great majority of comparable states, and
less than the average of all the states of the Union.
a smaller proportion of its total ordinary expenditure than the great majority of comparable states, and only two-thirds as large a share (20.3%) as the average of all the states (29%).

Comparison of Expenditure on Education by the Provincial Government of Ontario and by the Governments of certain States in the United States, Fiscal Year 1918-19.

Province or State	Population	Provincial or State Expenditure for Education	Per Capita	Total Ordinary Expenditure of Province or State	Percentage of Such Expenditure on Education
Ontario	2,760,000	$4,366,000* approx.	$1 58	$21,464,000	20.3
Ohio	5,304,000	6,041,000	1 14	24,766,000	24.4
Indiana	2,849,000	5,413,000	1 90	14,229,000	31.1
Illinois	6,297,000	6,892,000	1 10	23,644,000	29.2
Michigan	3,153,000	10,842,000	3 44	28,527,000	38.1
Wisconsin	2,567,000	7,415,000	2 89	17,731,000	41.0
Minnesota	2,331,000	8,475,000	3 63	23,265,000	36.5
Iowa	2,224,000	2,930,000	1 32	12,107,000	24.2
Washington	1,644,000	4,952,000	3 01	12,309,000	40.2
California	3,164,000	11,152,000	3 52	35,566,000	31.1
Kentucky	2,415,000	4,665,000	1 93	11,749,000	39.9
All States of United States	105,082,000	184,492,000	1 75	635,370,000	29.0

As to State aid to higher education in the United States, we find:—

(i) A steady and rapid increase in the amount of the grants.

(ii) A steady and rapid increase in the proportion borne by the State of the total cost of maintenance.

(iii) A steady and rapid increase in the proportion which expenditures for higher education bear to the total expenditure of the State.**

(iv) Some tendency to substitute for the system of annual appropriations a definite share of the revenue of the state, usually in the form of a mill tax on general property, to provide maintenance, supplemented by appropriations for buildings as the need is proved.†

Indiana.

"Purdue University, Indiana University and the State Normal School (giving general Arts work) receive the proceeds of a mill tax, amounting to 7 cents on every $100 of property assessed, which is divided on the basis of 2-5, 2-5 and 1-5 respectively. This basis of distribution has been observed for many years; it was originally agreed upon by the three institutions and incorporated in the appropriate acts."

Michigan, 1920.

"The principal support which the State of Michigan has extended to the University of Michigan during recent years is in the form of mill tax, three-eighths of a mill on each equalized dollar of valuation. For the past two or three years this has produced $1,687,500. Previous to that for five years it produced $1,050,000, and previous to that $850,000. From time to time appropriations for buildings have been made. The Agricultural College also has a mill tax of one-fifth of a mill, and special appropriations are made for it from time to time for buildings."

Oregon, 1920.

"The State of Oregon, by referendum vote in the general election of 1920, voted to levy a tax of 1.26 mills on the property of the state, for the support of higher education, in addition to an existing millage tax of .74 mills. The new rate of 2 mills will provide, on an estimated valuation of $1,000,000,000, $2,000,000 for the maintenance of the three state-aided institutions."

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* Including provincial appropriations for Ontario Agricultural College.

**Cf. Bulletin U. S. Bureau of Education, 1916, No. 26, p. 41: "Not only have State appropriations for higher education grown steadily from year to year, or from biennium to biennium, in nearly all the western and mid-western states, but the proportion of the total State appropriations which is devoted to higher education has increased steadily also."

† Cf. Biennial Survey of Educational Legislation, 1919: "In the matter of university general maintenance and current expenses, there is a tendency to increase the amounts allowed, and to stabilize support by providing for tax levies to replace the older practice of making specific appropriations by statute."

III. The grounds for considering that a substantial share of such provincial aid should be granted to Queen's University.

(a) All existing facilities in the Province are required.

The great increase in the numbers of students and in the range of university services will tax to the uttermost all the facilities for university education now available in Ontario. Even as it is, Queen's, like other universities, has found it difficult to carry on its work adequately. The difficulty has been met and largely overcome, owing in part to the co-operation of staff and students in adopting unusual lecture and laboratory hours, and in part to the excellence of our main laboratory facilities. In spite of overcrowding, no student has been compelled to accept instruction in scientific subjects without the regular amount of laboratory work.

It is fortunate that in the province there are already developed three university centres, equipped, in varying degree, with the staff, buildings, experience and traditions essential for facing this task. It is much more possible to meet the situation adequately and economically than if there were only one university to undertake it and if it were necessary to improvise double or treble faciliites. Universities are not built in a day. In so far as it is possible to utilize the existing facilities of Queen's and to extend them at comparatively low cost, it would be waste of money and waste of inherited spiritual value not to do so.

(b) Centralization is undesirable in University life.

A University is a great deal more than an educational institution in any narrow sense. It is a place where the atmosphere is made by the contact of student with professor, and of the student in one faculty with the student in another. In Queen's the members of the staff have always maintained a real intimacy with the students. The most powerful influence of the teacher has frequently been exercised in his own home in most human and informal discourse. The students in the various faculties know one another. The University is the largest factor in the life of a small city, and the student has an importance and a place that cannot be his in a large city where the University itself is only one among a dozen competing interests. The affection that is borne by old students of Queen's for their University is a fact that needs no demonstration. The institution has developed a certain family type, due to the fact that for three or four years there has been this close fellowship among men of widely differing interests and outlook. A student in Columbia University, for instance, who is one among twenty-one thousand students, may learn a great deal from able men, and he may completely miss the discipline and the contact of youthful mind with youthful mind, and the stimulation of close and intimate contact with teachers to whom he is more than a number in a seat or a name in a card index. He may emerge with a degree which he might have gained almost anywhere, but he will not have the broadening of mind and the stirring of affection for the very stones of the place that a smaller institution would have yielded him.

Different types and traditions are desirable in university life. Would Scotland have gained if she had had only one university instead of four throughout the past three hundred years? There is no question that diversity contributes to the richness of national life and the effectiveness of educational experiment.

(c) Aid to Queen's does not mean "diversion" of funds from Toronto.

The University of Toronto Alumni Association has issued a public statement, couched in moderate terms, warning of the dangers of such aid to other universities as would constitute a diversion from Toronto, as the Provincial University, of the funds necessary to make it a great and adequate seat of learning.

Queen's does not wish to have this question of provincial assistance made a matter of university rivalry or of political pressure. We assume that the purpose of the Government in appointing the Commission was to make it possible to have the question decided on its merits. We believe that it is possible to find a solution consistent with the interests of the province which will be to the interest of Toronto as well as of Queen's. We have taken pride in the achievements of the University of Toronto, and hope that its progress will continue, just as we hope that Western University will find a large and growing field for effective work in its prosperous western community. We may take this opportunity to express our pleasure at the spirit of good-will and friendly co-operation which has marked the policy of the officers and staff of the University of Toronto of late years, and our belief that the effectiveness of the work of all the Universities—Toronto, McMaster, Western and Queen's—has been greatly increased as a consequence.

Provincial funds granted to Queen's do not constitute a diversion from the University of Toronto unless it can be shown that they are being used less effectively than if added to Toronto's appropriation. As a matter of fact, if funds are "diverted," work is also "diverted"; Queen's in undertaking a part of the work of higher education in the province, and performing it at least as economically, thereby lessens the burden that would otherwise fall on Toronto's shoulders. The main question that faces the province is simply, how, given existing conditions, can we allocate our funds for higher education to produce the maximum results? Maximum results do not necessarily follow concentration, whether money costs or teaching results are considered. Queen's does not expect ever to attain Toronto's magnitude, and there are phases of university life and work more successfully achieved there than here, but we believe we also have our points of strength, and that there are forms of university work which we can do at least as successfully as any university in Canada. In so doing we are yielding the province maximum returns for any aid extended.

Queen's has not thought of proposing any change in its own formal status, much less presuming to propose any change in the formal status of the University of Toronto. It must be recognized, of course, that time and changing needs bring about changes in public policy in educational as in other affairs. There was a time in the history of Ontario when those in authority considered a certain denominational connection absolutely indispensable in a provincial university, and there came a time when those in authority cut off provincial grants to several universities simply because they had a denominational connection. There was a time when Queen's, though dedicated to the nation, belonged to a Church; there came a time when the Church relinquished all control and gave Queen's to Canada in form as well as in fact. There was a time when the University of Toronto was controlled directly by the Government; there came a time when, with good results, its control was given to an appointive Board of Governors, and there may come a time, if the present proposals of the University of Toronto Alumni are accepted, when a share in its control will be given, as at Queen's, to representatives of the graduates. There was a time when no Government grants were given to any university except the University of Toronto—and incidentally in no period was the amount which that University received so small in relation to its needs and the resources of the province as during those lean years when not a dollar was "diverted" elsewhere. There has since come a time, first under Sir Oliver Mowat, Hon. A. S. Hardy and Sir George Ross, later under Sir James Whitney and Sir William Hearst, when the province of Ontario saw fit to make substantial and increasing grants for the support of higher education, first in Kingston, and later in London, and at the same time to put the University of Toronto on a more adequate financial footing. Now a Royal Commission has been appointed to make, for the first time, a systematic study of university needs and finances. Queen's simply urges that the Government aid which has been given in the past quarter century, and particularly in recent years, should be increased and placed on a definite basis, which will enable the University authorities to do their work effectively, and make plans for some years at a time, and which will relieve the provincial authorities of the necessity of perpetual and piece-meal consideration of the question.

(d) Aid to Queen's does not involve wasteful duplication.

The question has been raised whether there exists any duplication in the activities of the universities of Ontario which could be avoided. The question is an important one. After careful consideration we have not been able to discover any duplication in the sense of unnecessary or uneconomical effort.

Duplication of the kind which should be avoided may exist when overhead costs in the shape of specialized and little-used buildings and equipment run high. But where construction and equipment costs are low, where maintenance and instruction is the main item of expense and the instructors are fully utilized, there is not duplication any more than when further instructors or additional buildings are provided at a single centre for increasing numbers. Our costs of operation are so low that it has proved as economical to carry on work in Kingston as to enlarge the accommodation at Toronto. The work of our various departments is so closely intertwined, so many departments benefit by what may be considered by-products of the work of other branches, that true economy consists in developing a well-rounded institution rather than single and isolated activities. Our departments of Chemistry, Physics, Biology, Mathematics, English, for example, give work in all three faculties, Arts, Science and Medicine, and thus ensure a very economical use of available resources.

It is not duplication, it may be added, but equal opportunity, to give the people of Eastern Ontario the same advantage of proximity to a university centre as is enjoyed by the people of Western Ontario.

While all the larger Canadian Universities, and particularly Toronto, McGill and Queen's, are national in the range of their influence and the sources of their student body, yet in these and other institutions the factor of local convenience is tremendously important. Harvard finds the great majority of its students within a hundred miles radius. Half of the women in the University of Toronto come from the City of Toronto. Twenty-two per cent of the students in attendance at Queen's this session come from the City of Kingston and County of Frontenac, and fifty-eight per cent. from Eastern Ontario. Of course, there are limits to this principle of local convenience, but in this large and diversified province, destined to contain many millions of people, the existing centres appear to be amply justified by strategic location, local interest and historical success.

In any case the question is not whether the three faculties of Queen's should now be established, but whether a going concern should be utilized effectively.

Queen's has this past session lost one of its Faculties, the Faculty of Education, which was in intimate relationship with the whole university, and particularly with the Faculty of Arts. The work of training teachers for secondary schools is now carried on solely by the College of Education, which is virtually a Faculty of the University of Toronto. Under these circumstances we feel that if any activities are to be given up on the ground of duplication, it is certainly not Queen's that should take the next step.

(*e*) *Distinctive character of Queen's. Aid to Queen's means the support of an institution that is second to none in its distinctive contribution to the provincial and national life.*

Education for Students of Moderate Means.

Queen's University, partly because of its location in a small city and partly because of its early associations, has drawn to itself a particular kind of student, and has made for itself a position which is unique. It has never been the University for the rich man's son; the conditions have perhaps been too strenuous for that. But, as Appendix IX, page 64, shows, it has drawn the children of the people of comparatively small means who yet had ideals and ambition. To Queen's have come young men and women who had nothing to look to except their own brains and diligence, and the majority of the students have had to work during the college years to assist their progress financially. The result has been that the University has acquired a reputation for solid work and a certain maturity among the undergraduates; while the graduates have been a valuable national asset. The Province of Ontario, and through it the Dominion of Canada, are now in possession of a great educational plant. The University is a "going concern" which has been created very largely by the efforts of thousands of people, themselves not rich, but keenly concerned in the cause of education. In few places has the dollar been spread as far as it has in Queen's. The whole tradition of the institution has been economy and self-sacrifice. On very narrow means a great work has been done.

Large Share in the Training of Teachers.

In the educational life of the Dominion, and of the Province of Ontario in particular, the University has taken a place great out of all proportion to its size. Its graduates have found their way in unusual numbers into the teaching profession, and those teachers in their turn have sent their promising pupils forward to their old Alma Mater. Teachers and ministers have indeed been the great recruiting agents of the University, and for this reason among others the educational type has persisted. The following figures, which reappear in a somewhat different form in Appendix XIII, bear striking testimony to the educational service that Queen's is rendering the Province:

Inspectors in Ontario.	
Graduates of Queen's	58
Graduates of all other Universities	49
Staffs of Collegiate Institutes in Ontario.	
Graduates of Queen's	146
Graduates of seven other Universities	329
Staffs of High Schools in Ontario.	
Graduates of Queen's	140
Graduates of nine other Universities	240
Staffs of Continuation Schools in Ontario.	
Graduates of Queen's	37
Graduates of four other Universities	30

Initiative.

Initiative has always been characteristic of the administration, and when the small resources of the institution are taken into account the extent to which it has been able to experiment has been remarkable.

Queen's was the first university in Canada to *admit women to its Medical School.* The experiment was abandoned only when the University of Toronto took up this work. Difficulties in the training which were very obvious when there was a small number of students were not so apparent where the student body was larger and classes could be divided, and so Queen's withdrew from the field after having shown the way.

Extra-mural work was begun with considerable misgiving about forty years ago. The necessity of some such arrangement was obvious. Students who were paying their way through College had occasionally to stay out for a winter in order to earn more money, and the University tried to give them some guidance in the keeping up of their studies. Out of this a definite system gradually emerged. There were hundreds of school teachers all over Canada who had begun to teach in primary schools without a university qualification, and they consequently found their promotion blocked and their usefulness limited. The University undertook the extra-mural system, which makes it possible for a student to cover from one-half to three-quarters of his Arts Course without attendance. The service thus rendered to the teachers of the province has been inestimable, and a large proportion of the University prizes falls to the extra-mural students, who are generally speaking senior to the intra-mural.

The Summer School was initiated some years ago also for the benefit of teachers. In 1910 it had 24 students; in 1916, 99; and in 1920, 218. Kingston itself is ideally situated for a Summer School, and there is every indication that this effort has become a permanent as well as an effective agency in the educational life of Canada. It gives teachers an opportunity to satisfy the residence requirements for a degree, or to continue their studies in their special field. It affords extra-mural students the opportunity of doing laboratory work in Science. The students in the Summer School are mainly from Ontario, although every province is represented. As illustrating the enthusiasm of the students, it may be stated that they have formed their own Association for publicity purposes. The advertisements of the Summer School which appear from time to time in the press are paid for by the students themselves, who in this and other ways bring the work of the School before the notice of every teacher in the province. No other Summer School in Canada is serving a third as many students as Queen's.

Through these two agencies of extra-mural work, and Summer School courses, Queen's University is offering the most effective and most widely utilized provision whereby teachers throughout the Dominion, and particularly in Ontario, can advance their standing and keep their knowledge fresh and their interest keen.

Courses in Commerce and Administration. Queen's was the first Ontario University to establish Courses leading to the degree of B.Com. The Course consists of two years' fundamental work in general Arts, followed by two years' work in economics and in technical courses such as accountancy, corporation finance, and industrial management. One course provides the non-professional training for Commercial Specialist teachers.

Engineering and Commerce. A combined course in Engineering and Commerce and Administration is under contemplation at the present time, and will fill a great and growing need. This is intended to give for the first time in Canada such a training to the Engineer as will qualify him to undertake the financial and administrative as well as the technical side of engineering work.

Banking Course. The B.Com. degree was the natural outcome of the University Extension work among bankers. The large Canadian banks were sensible of the need of providing for their employees instruction upon the wider aspects of their work, and so in 1914 an agreement was made with the Canadian Bankers' Association whereby the University undertook to "prepare a syllabus, conduct examinations, provide tuition in the advanced courses, and award diplomas; in other words, occupy as far as possible a relation to the banks corresponding to that of the Institute of Bankers in England." By July, 1920, no fewer than 538 bank officers had completed these Courses, and the Journal of the Canadian Banking Association for that month states:

"The students themselves proffer testimony as to the value of such a Course not only in assisting them with their everyday routine, but in giving breadth and freshness of view, in revealing the wider relations of their chosen work, in helping to interpret current trends in our complex economic and financial life, and in opening up new fields for thought and study."

At present about 400 students are registered in the Banking Course. Queen's initiated this branch of work, which has not been paralleled in any other university in Canada or abroad.

Research.

While the burden of teaching borne by Queen's professors has always been great, and while it has been felt that the needs of the undergraduates must first be served, there is and always has been a large amount of research work carried on by Queen's professors. For a great many years Dr. A. P. Knight has been doing work on the Conservation of the Lobster Fisheries for the Biological Board, work which has contributed materially to the knowledge of the subject. Professor S. F. Kirkpatrick's work on the metallurgy of the ores of Cobalt, of the scheelite ores of Nova Scotia, and the gold ores of Porcupine, has resulted in practical processes now operated on a commercial basis. Professor C. W. Drury's investigations have led to a successful method of extraction of potash from feldspar. Professors Connell and Lothrop carried on investigations of late cases of Trench Nephritis among the soldiers in the military hospital stationed at Queen's and obtained important results, which led to the conclusion that this form of the disease was of only temporary character, and might yield to treatment. Since the influenza epidemic of two years ago Professor G. B. Reed has been investigating the variability of the bacillus responsible for the disease, and discovered that there are at least five distinct groups only distantly related. He has also made a fruitful investigation of the protection afforded by serum treatment. Professor Clark's work on Critical Phenomena in liquids led to an invitation to co-operate on a similar investigation in the University of Leyden, Holland, which work was carried out a few years ago with important results.

Research is being carried on in the departments of Physics, Chemistry, Bacteriology and Botany at the present time under a system of grants made by the Board of Trustees upon the recommendation of a standing committee of scientific research. This is believed to be the first attempt in Canada to organize a concerted movement among the scientific departments of a university to stimulate increased activity in this important university field. The grants are made to purchase apparatus, books and supplies and for the employment of assistants for the routine work. The plan serves the double purpose of encouraging the work and of training workers. The problem of training research workers is perhaps one of the greatest of all connected with the development of research in Canada.

At the present time there are in Queen's upward of a dozen men trained in scientific research, who could, if they had a little more time at their disposal, produce a very large amount of important work. The plant is here, and all that is needed is a moderate amount for equipment and supplies and more assistance, so that time could be available for the work. The amount of work that would be done is out of all proportion to the expenditure. Many of these men are spending all or a part of their summer holidays in research, feeling that this is an absolutely necessary part of their work.

Queen's was the first university to establish a research professorship in Science. In 1919, the Chown Research Chair was established by G. Y. Chown, B.A., then Registrar of the University. This is to be in the department of either Physics or Chemistry. The first incumbent is A. Ll. Hughes, D.Sc., of Liverpool and Cambridge Universities, who is engaged in a series of researches on phenomena associated with the passage of electrical charges through gases and on allied problems. Dr. Hughes is one of the world's best known physicists, and has already obtained results of great value. With the exception of two or three hours per week of lecturing, his time is devoted to research.

Queen's was the first to establish a course for the training of research physicists. In 1918 a course in Engineering Physics was established in the Faculty of Applied Science, in which by a suitable combination of the work in the Science and Arts Faculties men could be trained in Physics, Mathematics, Chemistry and Electrical Engineering, so that they can undertake work in Research Laboratories.

Queen's was also the first to establish courses for training research workers in Biochemistry, Bacteriology and Biology.

Research, in the sense of the endeavor to make additions to the existing stores of knowledge, takes a somewhat different direction in the non-Science department of Arts. In a subject such as Philosophy, or History, or Mathematics, or Classics, the primary requirements are men of the reflective and inquiring bent, and adequate library resources. The Faculty of Arts in Queen's has always been fortunate in possessing men who had the will and the power to blaze new trails. The work of Dupuis in Mathematics, of Glover in Latin, of Shortt in History and Economics, of Cappon in literary criticism, and of Watson in Philosophy, is an enduring contribution to Canadian scholarship of which we feel proud.

Recently steps have been taken to furnish additional facilities for workers in some of these fields by (1) contributing to the travelling expenses of competent men in the pursuit of Canadian inquiries, and (2) by providing for the publication, in a series of University Studies, of such results of research and study as are considered to warrant it. As an instance of the work being done in Arts, and as a distinctive feature of Queen's work, we may note the studies now in process on various economic questions. The Trustees have recognized the pressing importance of social and economic issues, and the difficulty which the public meets in finding accurate and systematic information on scores of vital Canadian questions. Assistance is, therefore, being given in the preparation of studies which will endeavor, not to debate policy, but to present the facts necessary for judgment. Money and time have been lacking to do more than a fraction of what is needed, but two typical inquiries have been carried on: (1) an investigation by Professor W. C. Clark into the organization, method and policies of organized labor in the west, particularly in Winnipeg and Vancouver; and (2) an investigation by Professor W. A. Mackintosh into the economic and financial phases of the western rural co-operation movement. Reports on both investigations are to be published shortly.

Student Self-government.

Queen's was the first university in Canada to introduce student self-government, and it still carries the policy to an extent no other university has ventured to attempt. All the discipline of the students is attended to by the students themselves. If the Principal has received a complaint of the conduct of a student, he reports it to the Alma Mater Society, which deals with the matter in no uncertain way. Altogether the system has given a wonderful training to many generations of students, and it has increased self-respect and the sense of responsibility. It is confidently affirmed, too, that the order maintained under this system is better than that which could be enforced by any method of outward compulsion.

War Activities.

While Queen's during the war did only what every other university did—what it could—its activities had some special features which may be recounted briefly.

Field Engineers. For some years prior to the war Professor Macphail had carried on a successful company of Field Engineers in connection with the Faculty of Applied Science. Immediately on the outbreak of war he offered the services of the company, and it was at once employed in laying out the camp at Valcartier. After it had proceeded to the front a second company of Engineers was organized under Major Lindsay Malcolm.

No. 1 Field Ambulance. As soon as the war broke out, Dr. A. E. Ross, one of our professors, who had seen service in Africa, volunteered, and was at once placed in charge of No. 1 Field Ambulance. In this command he took with him a number of young graduates and under-graduates, who accompanied him to France. Throughout the war he remained at the front, and for the last year was Director-General of the Canadian Medical Services in France, with the rank of Brigadier-General.

No. 7 General Hospital. The Medical Faculty tendered to the Government in 1914 the personnel and part equipment of a Stationary Hospital of two hundred beds. Early in 1915 this was accepted, and the hospital was recruited and sent overseas in May, 1915. This unit was considered so effective after a short service in England that the War Office asked the Faculty to send reinforcements to make up a hospital of four hundred beds, and designated the enlarged unit for service in Egypt. Again, while the Hospital was established in Cairo, the Faculty was requested to make up the personnel to enlarge the unit to a General Hospital of one thousand beds. This also was done. After twelve months' service in the East, the Unit returned to France, where it was again enlarged to one of two thousand one hundred beds, and as such it continued till the end. For some time it was the largest General Hospital in France, and it cared for an enormous number of patients. During its service abroad, the Faculty, with the assistance of the local Red Cross, sent supplies and money for special equipment as well as for comforts for the patients.

When the Hospital was well established, the Faculty again tendered a Field Ambulance, and this was accepted and became a most useful and efficient unit.

It was with great hesitation and trepidation that the Faculty entered upon the first undertaking, that of the Stationary Hospital of two hundred beds, and serious doubts were expressed as to the possibility of such a small institution being able to carry it on successfully. The generous support given to the Faculty finally made it possible to staff and recruit, as well as to assist financially, the units mentioned.

Although the Teaching Staff was depleted and disorganized by these efforts, the school was kept open continuously, all the year round, through the period of the war, and the graduation of our students was hastened in every way consistent with proper and complete training. The result was that during these years there were two hundred and thirty-one young men graduated, of whom almost every one who was medically fit entered the Army Medical Services of Canada or Great Britain.

253rd Battalion, C.E.F. This unit was organized among the student body by Lieut.-Colonel P. G. C. Campbell, and was broken up to supply reinforcements on its arrival in England.

46th Battery, C.F.A., and 50th Battery, C.F.A. The 46th Battery of Field Artillery was organized by Major L. W. Gill, and served in France with the greatest credit. The 50th Battery was broken up in England.

Queen's Military Hospital. The University turned over to the Government the New Arts Building and the Grant Hall for hospital purposes. The whole building made an excellent hospital of nearly 400 beds.

Soldiers' Civil Re-establishment. The whole of the Mechanical Laboratories and much additional space was handed over to the S. C. R. for the training of disabled men. Up to the conclusion of the war Professor Manly Baker was in charge of this work, and all possible help was given to it by members of the University Staff.

Summer Session for Returned Men.

In the spring of 1919 many returned students were at a loose end. The University undertook to carry on a summer session, beginning in April and ending in October, for the benefit of returned men only. Every branch of engineering was offered, and about 100 men attended. The Dominion Government might have assisted this work as a part of the Soldiers' Civil Re-establishment policy, but no help was received. This effort cost the University about $17,000.

(f) Aid should be given to Queen's because of the rapid growth of the institution and its large contribution to the educational needs of the province.

The Faculty of Arts.

The Faculty of Arts in Queen's University has always been regarded as one of the strongest of its kind on this continent. The University itself was formed on the model of Edinburgh University, and effectively maintained the tradition of a thorough training in Classics and Philosophy. Mackerras, Fletcher, Dupuis, Glover, Cappon, Shortt and Watson have given the School a first class standing. In spite of the trend of the times towards economic and scientific study the humanities still hold their place. A gratifying feature of the University life is the large number of men who combine with a Science and a Medical training a Course that qualifies for a degree in Arts.

The Faculty of Applied Science.

The Science Faculty was founded as the School of Mining in 1893. The first class graduated in 1897 with two members. It was not found possible to confine the instruction given to mining engineers to mining alone. The right kind of mining engineer had to know more than appertained to mining. Thus to serve the country more efficiently the scope of the School was gradually extended to include courses in Electrical, Civil, Mechanical, and Chemical Engineering, as well as courses in Chemistry, Geology, and Mineralogy, and finally Engineering Physics. The additional staff and equipment necessary for these courses has not been excessive. A study of the table in Appendix X will show the growth in the various courses and the fluctuations. When there is a mining boom the influx into the Mining Course is remarkable. When the railroads are engaged in building, or there is other work requiring civil engineers, this Department is the popular one. The war brought Chemical Engineering into prominence, and a great development of this Course was demanded. Just now the Departments of Mechanical and Electrical Engineering are becoming more popular owing to the demands in these lines. By maintaining all of these departments Queen's is able to use her staff and equipment to better advantage than she could with fewer departments. When one department loses by the falling off in the demand for men, another gains, and the overhead expense remains about the same. With the growing feeling at Queen's that the emphasis must be laid more and more on the fundamental training of the engineer, the difficulties introduced by the fluctuations are minimized. Further, the equipment is kept smaller, and therefore up to date.

The staff of the School is young and progressive, including graduates of the best Engineering Schools on the continent. In-breeding is very slight, the greater number of the staff being graduates of other universities.

The departments of Physics, Geology, Mineralogy, and Chemistry, while nominally in the Science Faculty, have always done the work for the Arts and Medical Faculties, while the work of the Science Faculty in Mathematics, English, French, German, Spanish, and Economics is conducted by the departments of the Arts Faculty, so that the arrangement results in great economy and gives the students of all faculties a better point of view.

This Faculty has now 646 graduates and 397 students in attendance.

The Faculty of Medicine.

In 1854 the first classes in Medicine were held in Queen's University. The Medical Faculty was originally a Faculty of the University, but a separation took place in 1866, and for some years the Medical School was conducted under the Charter of the Royal College of Physicians and Surgeons at Kingston. In 1892 the Faculty again became an integral part of the University system. In 1913 the finances of the School were merged with those of the University. At the present time the Medical Faculty has the same relation to the Board of Trustees and Senate as the other Faculties.

Appendix XI will show the districts from which the students come and the districts in which the graduates are now labouring. It will be noticed that a large proportion of the medical graduates in the University are in country districts where need for medical attendance is great and the supply is often limited. About 1,700 graduates of the School are at present alive and practising throughout the world. In 1914 a five-year academic course was adopted, and this year the six-year curriculum has been entered upon. More students offer for entrance to the Faculty than can be received. The University limits the number of men in the first year to 50, and finds that for this number the clinical facilities are ample. Great efforts are being made to maintain the teaching in the Faculty on a high level. There are six full-time professors, six full-time assistant professors, two full-time lecturers and three full-time fellows on the staff, apart altogether from the clinical teachers. In addition two part-time professors have been appointed this summer, in Medicine and Surgery, at what is for Queen's the large salary of $5,000 a year. There is every indication that these appointments will bring to Kingston a much larger amount of clinical material from the country districts than has hitherto been available.

Up to this year the greatest need of the Medical Faculty was the enlargement and reorganization of the Kingston General Hospital, the appointments to which were already controlled by the University. Owing to the grant made by the Ontario Government and the great liberality displayed by Kingston there is nearly $1,000,000 available. The rebulit hospital will have 214 public beds. There is as well a great deal of material in the other institutions in the city. The Hotel Dieu, close to the medical buildings, has about 150 beds, and students have access to the wards of this hospital. In the Hotel Dieu there are two operating rooms and a classroom for clinical teaching. A recently established obstetrical department is growing rapidly. Rockwood Hospital for the Insane contains 650 beds, and the Superintendent and his assistants are members of the teaching staff of the Medical Faculty. Students have free access to this hospital, where medical and surgical and gynaecological clinics are given as well as Psychiatry. There is an operating room and an amphitheatre specially built for teaching. Numerous post-mortems are held, always conducted by the Professor of Pathology. The opportunities for teaching and study at Rockwood are invaluable. The Mowat Hospital for tuberculosis is within a short distance of Rockwood Hospital; the average number of patients is about 150. All types of cases, incipient, progressive and terminal, are received. The executive medical officer of the hospital is a member of the teaching staff of Queen's, and gives regular clinical instruction. These four hospitals furnish about 1,100 beds for teaching purposes.

The military hospitals have supplied a large amount of clinical work for the past five years, and these facilities will continue for some time to come.

The number of students enrolled in the different years is as follows:

First year	46
Second year	70
Third year	39
Fourth year	45
Fifth year	40

It will be noticed that the numbers in the second year exceed the limit of fifty. This is due to the fact that the University determined to give preference to returned men, with the result that it found itself, under the conditions, obliged to go beyond its self-imposed limitation.

The facilities for post-graduate and research work are as follows:

1. Hoffman Scholarships.
   - (*a*) Surgical Pathology, $1,000 per annum.
   - (*b*) Surgery, $750 per annum.

2. Teaching fellowships for young graduates in
    - (*a*) Anatomy.
    - (*b*) Pathology and Bacteriology.
    - (*c*) Physiology.
    - (*d*) Chemistry.

    These appointments all provide opportunity for post-graduate and research work.
3. D.P.H. Course as outlined in Calendar.

See Appendix XII for details of the growth of the University.

(*g*) *Aid to Queen's is necessary if the University is to continue the work it has been doing so successfully.*

The necessary increase of salaries, the higher costs of operating and maintaining the plant, the enormous advance in prices of all physical material, have more than counterbalanced the recent addition of $1,000,000 to the endowment. A third of the new income thus obtained has been absorbed by the increased cost of coal alone. Although the utmost economy is being practised, the University will have a deficit of $40,000 at the end of this financial year. For reasons stated on page 3 it is practically impossible at this time to secure any considerable addition to the endowment from private sources. If, therefore, the University is even to maintain its present status, it must receive further aid from the province, not only for ordinary costs of maintenance, but for capital expenditure that has become imperative.

(*h*) *The present tendency in the United States, and particularly in the United Kingdom, is to give state aid to all efficient educational institutions doing work of University grade.*

Example of the United States.

It is sometimes declared that the example of the United States supports the theory that each state or province should concentrate its aid wholly upon a single state-controlled institution. The facts do not bear out this contention. There are at least four distinct policies observable in the United States:

(1) A few states, particularly in the east, make no grant to institutions of University rank, or only a nominal sum, e.g., Delaware, Rhode Island, Florida.
(2) Some states, chiefly western, give grants to one state-controlled institution only, e.g., Arizona, California, Louisiana, Nevada, Wisconsin, Wyoming.
(3) Some states, a larger number, give grants to two or more state-controlled institutions, e.g., Michigan, Ohio, Kansas, Iowa, Colorado, Washington.
(4) Some states give grants to two or more institutions, of which some may be state-controlled, and some have independent governing boards, e.g., New York (to Cornell, Syracuse and St. Lawrence), Massachusetts (to Massachusetts Institute of Technology and Worcester), Pennsylvania (to the University of Pennsylvania and the University of Pittsburgh, as well as to the state-controlled Pennsylvania College), New Hampshire (to Dartmouth College, as well as to the state college), and Virginia (to the College of William and Mary, as well as to the state-controlled University of Virginia).

While states of good educational tradition are to be found supporting each of the latter three policies, it may be noted that within the past twenty years the trend has been distinctly along the line of the fourth policy, granting aid to every institution which has proved its place in the life of the community and is doing necessary and effective work, whether founded originally by state action or by private endeavor.

Example of the United Kingdom.

When we turn to the United Kingdom, where interest in higher education is quickening and grants to higher education increasing rapidly, we find the absolute and unquestioned adoption of the principle of granting aid to every existing institution which maintains university standards and is doing effective work.

The universities at present in receipt of grants from the national treasury are: Birmingham, Bristol, Durham, Leeds, Liverpool, Manchester, Sheffield Universities, and Nottingham, Reading and Southampton University Colleges; and in London, University College, King's College, Bedford College, School of Economics, East London College; University of Wales and Aberystwyth, Bangor and Cardiff University Colleges; St. Andrew's, Glasgow, Edinburgh and Aberdeen Universities; The National University and University College, Cork, University College, Galway, and University College, Dublin, Queen's University, Belfast.

It will be noted that this list includes every university and college in the United Kingdom except Oxford, Cambridge, Trinity College, Dublin, and Exeter University College. Until recently Oxford, Cambridge and T. C. D. found their old endowments sufficient, but of late the influx of students and the decreased purchasing power of their rents and revenue has led the former two to seek state aid. Oxford is already receiving a grant for its Engineering School, and Cambridge for its Medical School. A Royal Commission was appointed a year ago to inquire into the financial resources of these two universities, and while it has not yet reported, the trend of the discussion makes it apparent that in addition to some shifting of old endowments, state grant will be recommended. If this is effected, every university, and university college of recognized standing in Great Britain will be in receipt of an Exchequer grant. Exeter is excluded because it has not yet developed the financial resources or the academic reputation considered necessary to warrant state aid.

The grants have increased rapidly in amount. The first state aid to higher education in England and Wales was the grant of £2,000 to Aberystwyth College in 1882; in 1887, Manchester received the same amount, the first grant to an English University. By 1912 the Exchequer grants reached £175,000, constituting, in the case of the English colleges, 35 per cent. of their income, and, in the case of the Welsh colleges, 54.3 per cent. In addition nearly £100,000 was voted for special technological and professional work. The Exchequer grant alone to the Universities of England and Wales for 1920-21 is £1,000,000; for 1921-22 it is to be £1,500,000, plus a grant for pension funds. This is considerably more than three times as much as was allotted just before the war.* The four Scottish Universities received aid for many years earlier; their grants and the grants to the newer Irish institutions are also rising rapidly.

The grants are usually for maintenance, though in the case of the newer Irish Universities sums have been provided for capital expenditure, and similar grants have recently been recommended for Wales.

Methods of Allocating Grants to British Universities.

As to the method and basis of allocation, a recent Bulletin of the United States Bureau of Education states:

> "The new universities, though the charters run in the name of the Sovereign, are universities of the people, founded by local contributions and generosity. They are not, therefore, State universities in the American sense of being State-owned and State-controlled, though so largely State-supported. The grants are determined on the report of experts in consideration of two facts: (1) The efficiency of the university and the value of the work which it does, and (2) the extent of the local support which it receives. The Treasury, the board of education, or other board administering the funds, constitutes advisory committees, ordinarily quinquennially, consisting of the most eminent educators or experts, who serve without salaries. This method of distributing State aid in lump sums, together with the broadly representative membership of the autonomous governing board of each institution, prevents the evils of State interference and combines the benefits of State relationship with efficiency and freedom in the institution."**

The Scottish University Commission of 1900 deals with the question of the basis of allocation as follows: "In framing a scheme of division we felt it to be our duty to consider in each case, not only the needs but the opportunities and the number of students of each university, and also the extent to which they had respectively been able heretofore to contribute to the general education of the country. The scheme of distribution was accepted by all four Universities as just and satisfactory."

IV. What Queen's has done for itself.

Steps which led to the foundation of the University were taken by the Presbyterian Synod in 1835 at the height of the controversy over the clauses in the charter of King's College confining control and teaching to the members of the Church of England. The charter was granted to Queen's in 1841; classes were opened in March, 1842, but twenty-five years after the foundation of the University its affairs were in a most critical condition. It was largely due to the efforts of the late Principal Grant that the University survived its time of difficulty.

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*"His Majesty's Government fully appreciates the vital importance of the work of the Universities in the national life, and Parliament has recognized that importance by sanctioning recurrent grants-in-aid amounting to £1,000,000, a figure rather more than double the grants paid before the war, as well as a non-recurrent grant of £500,000, to assist the Universities to restore their pre-war activities. . . . Having regard to the urgency of the matter . . . I will submit to Parliament an increase in the present vote from £1,000,000 to £1,500,000 in the estimates for 1921-22." (Letter from the Chancellor of the Exchequer to the Chairman of the University Grants, July 16, 1920.)

** The present committee consists of: Sir William McCormick, of the Carnegie Trust; Dr. Bateson, formerly Professor at Cambridge; Sir D. Clark, formerly Director of Engineering Research for the Admiralty; Sir J. Dobbin, Principal of the London Laboratory; Miss M. F. Fry; Sir F. G. Kenyon, director of the British Museum; Sir William Osler, Regius professor of Medicine at Oxford (now deceased); and Sir J. J. Thomson, president of the Royal Society.

(*a*) The original *endowment* amounted to $50,000. Campaigns in 1869, in 1887, in 1902, and in 1912 raised in all nearly $1,000,000. When the Theological College separated from the University it took $200,000 of this endowment with it as its fair proportion of the whole. Another endowment effort, which has just been completed, has realized up to the present $900,000. The total endowment now stands at $1,790,000. This has been very largely gathered from a constituency that has been poor in material wealth but rich in its affection for the University.

(*b*) *War Deficits.* On the outbreak of the war Queen's, like every other university, found itself in a grave position. The student body had almost disappeared, while the fixed charges remained. For the first three years of the war Dr. James Douglas, the late Chancellor of the University, met the deficits, amounting during that time to nearly $100,000.

(*c*) *Buildings presented by individual and corporate effort:*

1. *The Old Arts Building* was presented by citizens of Kingston, in 1880, at a cost of about $52,400.
2. *The Carruthers' Hall* was presented in 1890 by the late Mr. John Carruthers, and cost $29,500.
3. *The Kingston Hall*, the New Arts Building, was presented by the City of Kingston in 1904, and cost $70,000.
4. *The Grant Hall* was presented to the University by the old graduates in 1905, and cost over $45,000. The Commission may remember its stately interior, and will agree that it was very well worth the money.
5. *The Nicol Hall* was built in 1912 from funds mainly supplied by Professor William Nicol, Professor of Mineralogy. The hall cost $70,000. Of this total $45,000 was supplied by Professor Nicol under an arrangement by which his wife has a life interest in the amount.
6. *The Gymnasium* was erected by the student body in 1906 at a cost of $30,000, and remains their own property.
7. *The Stadium*, which is approaching completion, has been wholly given by Mr. James Richardson, in memory of his brother, Captain George Richardson, a Queen's graduate and a famous athlete. The cost has already amounted to more than $50,000.

(*d*) *Library and Residence Funds.*

In 1914 Dr. James Douglas gave $150,000 for the erection of the new Library. On the outbreak of war building was deferred. The Library Fund now amounts to $201,000.

The Alumnæ of the University have for years been engaged in raising funds for the erection of a Women's Residence, greatly needed. They have now in hand about $65,000.

(*e*) *Kingston General Hospital.*

The Government of Ontario has recently made a handsome grant to aid in the reconstruction of this hospital. Apart from this grant, however, the Kingston Hospital has been entirely maintained by local benefactors, and the building, as it stands, is a product of repeated acts of liberality on the part of the citizens.

Reconstruction of the Hospital. The sums available for rebuilding are:
$100,000 from late Dr. James Douglas.
$100,000 from estate of the late Senator Richardson.
$100,000 from subscriptions of the citizens of Kingston.
$150,000 from the Corporation of the City of Kingston.
$50,000 from the County of Frontenac.
$30,000 from the Counties of Lennox and Addington.
$400,000 from the Government of Ontario.

$930,000

V. *What the Government of Ontario has done for Queen's.*

Early in 1892 Principal Grant approached the Ontario Government, with a view to securing assistance for the University. The Government did not see its way to change the policy of not making grants to denominational colleges—a policy which had been inaugurated by Mr. John Sandfield Macdonald in 1867. Sir Oliver Mowat, however, who was Premier of the Province in 1892, intimated to Principal Grant that the Statutes of Ontario, 1891, chapter 60, contained an Act for the establishment of Mining Schools for municipalities singly or in groups, and that at the previous session grants had been voted to equip and sustain a School in Port Arthur, and to pay the salary of an instructor. Sir Oliver said that this grant had not been made use of, and that if Kingston cared to establish a School, a grant would be available. The hint was taken, and in December, 1892, it was decided to establish a School of Mining and Agriculture in Kingston, with a Directorate which would link for practical purposes the School with the University. In 1893 the School received a grant of $5,000 for maintenance. In the following year it received the same sum for maintenance, $5,100 for a Mining Laboratory, and $3,500 for the Dairy School. From that date until 1916, when the School of Mining was amalgamated with the University, the Ontario Government made grants for the erection and equipment of five buildings, to be devoted to work in Mining, Civil, Mechanical, Electrical and Chemical Engineering, and was at the total expense of the operation of the School of Mining, with the exception of the fees received from the students and the interest on the original endowment, privately raised, of $43,000.

The buildings given by the Government of Ontario to the University are as follows:
1894—The Mining Laboratory, costing $14,800.
1902-04—The Central Heating Plant,
Fleming Hall, housing Mechanical and Electrical Engineering,
Ontario Hall, housing Physics, Geology and Mineralogy,
at a cost of $164,000.
1905—The New Medical Building, costing $50,000.
1911-15—Gordon Hall, housing Chemistry and Chemical Engineering, costing $120,000.

Government Grants.

These grants began in 1893 with $5,000 for the School of Mining, and until the separation of the University from the Presbyterian Church the grants were all confined to the School of Mining and Agriculture. Since 1912 all the Faculties of the University have shared in the Government grants. In recent years the recognition of growing needs has brought a steady and substantial increase. The grant for the year 1919-20 is $165,000, and $80,000 is being given through the University to the Kingston General Hospital as one-fifth of the total grant of $400,000 for re-building the hospital.

VI. Future Requirements.

A. *Plant.*

Taken as a whole the equipment of the University is good. Every Faculty is in first-class working order. Since the outbreak of war, however, and the consequent rise in prices comparatively little has been added to the equipment of the University, and repairs have been delayed as far as possible.

Additional Buildings Needed.

(*a*) *The new Central Heating Plant on the water front.* The land for this plant is available, but not purchased. The reasons for urgency are these:

(1) The present plant is working to its extreme capacity. Nothing can be undertaken in the way of building which will not involve an extensive alteration of the present heating plant.

(2) The position of the present plant is unsuitable. Though its central situation means a minimum range of piping, it also involves the constant blowing of smoke upon one or another of the surrounding buildings, with the result that the gutters are rapidly corroded. Moreover, there is no room for the storage of coal, which, on being drawn from the water front or from the railway station must be piled about the grounds until needed, and then re-hauled to the fire-hole. This means the disfigurement of the campus and the expenditure of a large sum for cartage.

The removal of the heating plant from Fleming Hall would provide room for the expansion of Mechanical Engineering without additional building.

(3) The plan for co-operation with the Hospital. The Kingston General Hospital is about to be rebuilt. It has, at present, no Central Heating Plant, and runs no fewer than seventeen furnaces. The Hospital consequently has to reconsider its heating arrangements and the University, whether it erects a new plant or extends the old one, has to face large expenditure. In view of the close connection between the University and the Hospital it would appear to be altogether uneconomical to erect two new Heating Plants. As the University is much the larger user of heat and power the suggestion is that the University should build and operate a Heating Plant on the water front and sell heat to the Hospital, through the grounds of which the piping to the University must in any case pass. A competent engineer, who has recently investigated the whole matter, on the joint request of the Trustees of the University and the Governors of the Hospital, states that the new plant on the water front would cost, including land, dock, coal handling equipment, and all service for both institutions, about $250,000. It is confidently believed that this is a sum less than that which would require to be spent on heating by the two institutions separately, while there would be the continued economy through the operation of one plant instead of two, and through saving in the haulage of coal.

(*b*) *New Library Building.* The present Library contains an admirable collection of books amounting to about 80,000 volumes and about 15,000 pamphlets, including the most valuable collection of Canadiana in existence. In several respects it is the best University Library in the Dominion. The congestion, however, is so great that it is almost impossible to allow students to have access to the shelves. Stacks have been placed between stacks until the titles of the books can hardly be read. Such extensions as could be made in the present buildings have been utilized for stack and reading-room purposes, but the whole work of the University is suffering seriously from the fact that it is impossible under present conditions to allow the students to use the Library as a library should be used. There is also grave danger of fire under the present conditions. What can be done has been done to make the Library fire-proof, but it is impossible so to remodel the Old Arts Building as to make it a satisfactory home for so irreplaceable a property as the University Library. It is proposed to erect the new Library on a site north of Ontario Hall. The funds available from the Douglas gift are, as has been stated, about $200,000. The estimate of the architect is that the whole building as planned could be erected for $375,000. A grant of $175,000 would, therefore, complete the Library.

(*c*) *Residence for Women.* Until a few years ago women students, who came to Queen's, had to find lodgings in exactly the same way as men students. The University saw to it that the lodging-houses were supervised, but, while the record of the students was wholly good, parents naturally looked for the taking of some more personal interest in their daughters. The result was the renting of first one house and then a second, these two houses having accommodation for about sixty girls in all.

For several years the Alumnæ have been labouring to raise money to erect a Residence which could be built in units, and which will eventually accommodate all the women students with the exception of those whose parents reside in the city. It was thought that this building could be erected for $160,000, and the trustees agreed to give the Alumnæ substantial assistance when the contributions from private sources had reached the sum of $80,000. Renewed efforts by the Alumnæ have made it evident that the University will soon be called on to fulfill its obligation. The estimate for the Residence is now, however, $185,000, and the trustees can redeem their promise only by divesting the University of a portion of its slender endowment. One hundred thousand dollars from the Government would permit the building of the Residence to be proceeded with at once, and would allow the trustees to maintain intact the endowment of the University.

(*d*) *Extension of Existing Buildings.*

(1) *Chemical Engineering.* In the Chemistry building only one room is given to the subject of Chemical Engineering, which is yearly becoming more and more important. A wing could be thrown out to the south of the Chemistry Building, similar to that which has already been erected to the south of the Metallurgy Building, for the purpose of the housing of Chemical Engineering. The probable cost would be about $37,500.

(2) *Electrical Engineering* has outgrown its quarters in Fleming Hall. The equipment is good, but it is not possible under present conditions to give room for the students to work. A wing could be thrown out to the north of Fleming Hall which would accommodate the development of the Department of Electrical Engineering, while the erection of the new Heating Plant on the water front will give Mechanical Engineering room to expand in the space at present occupied by the boiler room. The cost would be about $37,500.

(3) *Hydraulics Laboratory.* With the development of the Hydro-Electric power of this province, the need for study of hydraulics and power-plant development becomes increasingly important. For this, Queen's is admirably situated, but needs a small laboratory for this work, containing small units. The cost would not exceed $30,000.

(4) *Biology.* The teaching of Biology has largely been confined to two dingy rooms in the Old Arts Building, and so brilliant a member of the staff as Professor MacClement has scarcely had any opportunity to develop his department. At present the teaching of Biology is carried on in three different buildings. Without the erection of any separate building, room could for the present be found in the attic of the Kingston Hall. Were this fitted up and several dormer windows thrust out six extra class-rooms could be provided. Room would thus be secured for Biology until the Pathological Department moved from its present quarters in the Medical Laboratories Building to the reconstructed Hospital. One great advantage in the fitting up of this attic floor would be that no additional heating would be required. The estimated cost in 1914 was $17,000. Perhaps a figure of $35,000 to-day would not be considered excessive.

(5) *Extension to Gymnasium.* The gymnasium, built by the students for themselves fourteen years ago, is inadequate for the increased student body. It is in use all day long, with the result that the women students have not received adequate gymnasium facilities. The gymnasium should be extended either by the addition of another floor or by the thrusting out of a wing.

(*e*) *Skating Rink.* The present Skating Rink is completely outworn. Plans have been drawn for the erection of a new rink with a sheet of ice 210 ft. by 90 ft. upon the present site. The Athletic Association looks to the graduates for large help in this matter, particularly as circumstances may compel the Association to proceed with the erection of a new rink by next winter.

(*f*) *Students' Union.* Queen's greatly suffers from the lack of a Students' Union. There is no one place where the student body can gather, and the close intimacy of the members of one Faculty with another has been due only to the fact that all the University buildings are upon the one campus. At present the Arts students have a room in the Arts Building; the Engineering students a room in Carruthers' Hall; the Medical students a room in the Old Medical Building.

The Dominion Government, which occupied the New Arts Building during the war as a hospital, left the temporary kitchen which it had erected, and this kitchen has now been converted into a cafeteria. The premises are not very suitable for the purpose, and in any case the structure is such that its life cannot be long. Still, such as it is, the cafeteria meets a real want. The students can purchase twenty-one meal tickets for $5.50. A Students' Union, however, where all the student activities would be centred, is greatly required. Here again private liberality may be expected to realize the necessity.

(*g*) *Residence for Men.* No provision whatever has yet been made at Queen's for men's residences.

New Equipment Needed.

Five thousand dollars spent on *Mechanical Engineering* would enable the staff to do as good work as is done in any school if larger quarters are provided as suggested above.

Electrical Engineering needs a similar amount for equipment.

In Civil Engineering new equipment is required, but the amount need not exceed $5,000. The other departments must have additional equipment, but this should be acquired gradually, and the amount needed is not excessive.

Mining Engineering. An expenditure of $5,000 would provide small laboratory equipment adequate to deal with small quantities of ore. With such apparatus the tests required by the ordinary shipments from mining engineers can be carried out.

In all of the Engineering Departments at Queen's the tendency is toward smaller units in the laboratories. They serve the purposes of teaching, and can be overhauled. or rebuilt, or even scrapped when out of date, and new units can be purchased. This is impossible without enormous expense when the equipment is very large. It is the growing conviction at Queen's that emphasis will be placed more and more on the fundamental training of an engineer and less time will be given to the details of technique, which must eventually be acquired in the actual plant or laboratory in which the graduate finds himself. Hence the stress placed on the small equipment. The required additions to buildings and equipment are very small indeed compared to the value of the plant and equipment now in use.

Repairs Which Are Needed Immediately.

(*a*) *On the Old Arts Building.* The floors are done and should be relaid with hardwood; the building must be rewired and generally overhauled.

(*b*) *In the Carruthers' Hall* the roof requires to be renewed, and a number of structural changes made in the laboratories.

(*c*) *The Mill or Mining Laboratory.* Eventually the present building should be torn down to make room for a more dignified and serviceable structure to house the mill work and the University machine-shop. The present mill has had practically nothing done to it for a great many years, but with moderate repairs it can be made to serve a long time. Two thousand dollars a year over a period of five years would bring the mill up to an adequate level. Large lots of ore in amounts up to five tons are frequently sent in, and the amount could be increased if facilities permitted. The ability to do work of this kind has made Queen's of great service to the province.

(*d*) Generally speaking, the limestone buildings require constant attention and pointing on the south and west sides.

B. *Maintenance.*

It is not the intention of the University to branch out into new fields or faculties. but to seek to maintain and consolidate its present position. The following list of requirements covers simply the most careful estimate that has been possible of the expenditures essential to carry on our present work properly and effectively.

1. *Existing Provincial Grant* $165,000

2. *Deficit.* With the utmost economy it has been found impossible to meet out of revenue the costs of present activities. The deficit for the fiscal year ending March 31, 1921, will be $40,000. But the present scale of salaries has been in effect only since last October, and for the next financial year will involve an expenditure of $14,000 more than in the current year. Even to carry on the present scope and scale of work will therefore require the addition to the present budget of $54,000

3. *Additional Staff.* It is not intended to increase the numbers of the staff in any appreciable degree at present; if the existing staff can be held, they will be sufficient, with a few temporary appointments or shiftings to meet special growth, to do the work. We should, of course, be glad to have such an increase of staff as would permit more personal and individual teaching, but as it is not possible to meet every need, we think it more important to provide an adequate salary for a staff of substantially the present numbers. There are, however, two chairs now vacant, English and Public Health, and these would require at least $8,000

4. *Salary Increase.* The greatest weakness of Queen's is the low scale of salaries paid the professorial and administrative staff. Increases have been made from time to time, but it has not been possible to keep pace with the rise in the cost of living. This is the serious side from the standpoint of the individual professor. From the standpoint of the University, the more serious aspect is that our salary scale has not kept pace with the rise in other Universities. This means inevitably that we shall find it difficult to attract men of the calibre we desire, and difficult to hold the better men on our own staff, or to ensure the reasonable degree of content and the freedom for continued study essential for effective work.

A comparison of some professorial salaries, in large institutions and in small in the United States and in four Canadian Universities, follows:

University.	Lecturer or Instructor.	Assistant Professor.	Associate Professor.	Full Professor.	Full Professor Head of Dept.
Queen's (including temporary bonus given October, 1920, *average*. Arts	1725	2420	2800	3115	3905
Science and Medicine.					
McGill, 1920, *average*, Arts, and Applied Science	2500	3150	3750	5100	
Medicine		2500	4000	5200	
				(range)	5000-6000
British Columbia, 1920, *range*	1600-2100	2200-2900	3000-3450	3800-5000	
Toronto,*					
1919 *range*	1500-2500	2500-3000	3100-3900	4000-4500	4000-5000
1920 *range* including bonus.	1875-3125	3125-3750	3875-4875	4800-5400	4800-6000
Columbia, 1920	2000-2400	3000-6000	4500-5000	6000-8000 10,000 in some cases.	
Harvard, 1920	1000-3000	3500-4500	5000-6000	6000-8000	
Cornell (endowment campaign in progress), *average*	1479	2639		4100	
Wisconsin, 1920	1500-2200	2000-3000	2750-3750	3500-6000	
Chicago, 1920		3000-4000	4000-4500	4500-8000	
Ohio State, 1919, *average* (Rapid "turnover" of staff.)	1883	2856	2912	4230	
Haverford, 1920	1000-2500	3000	4000	5000-6000	
Bryn Mawr, 1920 (Women's College.)	1800-2200	2400-2700	3700	4500-5000	

These figures, and the chart (Appendix XV), make clear that an assistant professor in McGill or Toronto receives not merely more than our assistant professors, but more than our associate professors, and more than our full professors. It may be noted also that the proportion of associate to assistant professors is higher in both McGill and Toronto than in Queen's. McGill and Toronto associate professors are paid more than our heads of departments, and some heads fifty per cent. more than our heads of departments. The average salary of all those members of the staff of Queen's who have been in academic work since graduating from their University 25 years ago is $3,420, or less than young assistant professors receive elsewhere.

This great discrepancy cannot be defended on the ground of difference in the cost of living. Montreal and Toronto are probably still slightly more expensive places to live in than Kingston, particularly as to rent and as to domestic service (the latter requirement, for most of our staff, is an item of what is humorously termed mere "academic" interest). It may be that standards of living are higher, but this is a matter of individual choice. Certainly the difference is small. Recent years have levelled living costs, east and west, in large cities and small, and, as the table given below indicates, living costs have risen since 1910 much more rapidly in Kingston than in the average Canadian city, and are now on a level with the Canadian average.*

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*In the case of the University of Toronto, exact figures are not known; the estimate given is based on press statements to the effect that the bonus given in 1920 amounts to twenty per cent. for full professors and twenty-five per cent. for others. Of course, as such bonuses are calculated on actual salaries and not on the range or scale, the figures given may not be exact, but this information will doubtless be in the hands of the Commission.

Neither can the discrepancy be explained on the ground that our staff do not deserve equal consideration. We have no question that hitherto, whether in adequacy of training, or in power of teaching, or in productive scholarship, the staff of Queen's have been able to bear comparison with those of any other institution.

The fact is that the difference exists simply because we have not been able to help it. Costs rose faster than resources. We do not consider it is possible to bridge these gaps at once, or even to bridge them fully for some years to come. Our proposal, in view of all existing conditions, is that provision should be made for an immediate increase in the salary budget of approximately 20%, which will still make salaries at Queen's in no case higher, and in most cases lower, than corresponding Toronto salaries of 1919, without counting the bonus given to the professors of Toronto University this year. It would be desirable to be free, in a few cases, to offer somewhat more than our average, if necessary to secure men of special distinction. With readjustments in some of the administrative salaries this would involve an additional sum next year of $52,000

5. *Equipment.* Assuming that provision is made to cover the accumulated war-time deficiencies, as proposed under Capital Expenditure, it is believed that additional annual outlay on the equipments in Arts, Applied Science and Medicine necessary to keep our work abreast of current developments (apparatus, maps, charts, departmental equipment), can be kept down to $10,000

6. *Repairs and Contingencies.* Under Capital Expenditure some of the larger and more pressing requirements are given. In addition there are many minor needs calling for attention. Great economies have been exercised during the last few years in building matters. The administration of the University has been economical to the extent of parsimony. As an instance of this it may be said that with all its valuable buildings the University employs no night watchman nor has it any permanent works staff. It has no carpenter, electrician, or plumber. These wants are met as occasion arises, but the University has now reached a point when it may be questioned whether this parsimonious administration is really economical. The need could be met by an annual amount of about $15,000

7. *Library.* Before it will be possible to move into the new Library building, it is essential to recatalogue a large part of the books on a more modern and scientific basis. A beginning has been made, but it is necessary to do the work on a more extended scale. In addition, the rise in book prices makes it necessary to increase the funds available for current purchases. For these two purposes the minimum requirement would be $4,000

8. *Improvement of Summer School.* We have in our Summer School a great opportunity. The firm basis it has secured, the eager support of its student body, the coolness of the Kingston summer, the example of summer schools in the United States, and the marked primacy our School enjoys in Canada, make clear that it is an asset to be developed. We hope to make it possible for Canadians in general to secure here much of the advantage they now seek in the summer schools of New York and Chicago, and for Ontario teachers in particular to find here in increasing measure a stimulus and an opportunity. To provide more adequately for instruction, and, for example, to secure the services, in common with one or two other institutions, of a man like Sir Arthur Quiller-Couch during a summer session, the sum is proposed of $5,000

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*DEPARTMENT OF LABOUR, FAMILY BUDGET

Kingston in 1905 taken = 100

	1900	1905	1910	Jan., 1915	Jan., 1920
In the average of the sixty Canadian cities listed	11[illegible]	117	142	159	269
In Kingston . . . . (about	95)	100	117	157	268

9. *Improvement of Extra-Mural Work.* The extra-mural courses for teachers, leading to degrees in Arts might be made distinctly more helpful if funds were available for additional instruction and correction, and for the provision of more extensive instruction material, at a cost of $3,000

10. *General Extension Work.* Something has been done in the way of extension lectures and the provision of information and courses of instruction for adults, who are not working toward a degree, but not as much as the needs demand. We could to advantage expend an additional $4,000

11. *Commerce.* As yet, the instruction in Commerce has been largely a by-product of the work of the Department of Economics. To secure somewhat more specialized instruction, particularly in connection with the course in Engineering Administration now under discussion by the Faculty of Applied Science and the School of Commerce, the estimate of net additional requirements is $4,000

12. *Research and graduate scholarships.* Research is not an extraneous or ornamental activity, but a vital and integral part of the work of any university which is more than a high school. The distinctive feature of University work is that its members are not content merely to hand on received knowledge, though that is important, but are bent on adding their share to the common stock. Given a staff of capable men, interested in their work, a large proportion of them will find it as natural to investigate, experiment, develop new lines of speculation, as to breathe. A notable number of the men we have and the men we want will be research men, whatever the material difficulties in their way.

    Centralization of Scientific Research in one or two universities in a country like Canada would be fatal to the spirit of research. It would be contrary to the opinion of the world's experts. The heads of such great laboratories as those of the General Electric Co. at Schenectady, the Western Electric Co. in New York, and the Bureau of Standards in Washington, are opposed to such centralization. To deny to any university the right to conduct research is to stifle and condemn it to perpetual mediocrity. Only by cultivation of the research spirit wherever it can be found can this country take its place among the progressive countries of the world.

    But research does not necessarily involve large expenditure. Some problems may call primarily for elaborate apparatus, but there are others which need mainly brains and time. Queen's University does not propose any increase in capital construction, or any additional appointments to the staff primarily for purposes of research. A very moderate addition to our funds would make it possible effectively to supplement the present equipment, and to give the staff more opportunity for original work. The sum proposed is $20,000

$344,000

SUMMARY OF THE NEEDS OF QUEEN'S UNIVERSITY.

I. *Capital Expenditure.*

1. What the Provincial Government might do for the University in the immediate future:

Central Heating Plant	$250,000
Library	175,000
Women's Residence	100,000
Gordon Hall Extension (Chemistry)	37,500
Fleming Hall Extension (Electrical Engineering)	37,500
Hydraulics Laboratory	30,000
Kingston Hall Extension (Arts and Biology)	35,000
New Equipment for Faculty of Applied Science	20,000
Repairs are urgently needed for:	
Old Arts Building, new floor and general repairs	15,000
Carruthers' Hall, including new roof	15,000
Mill or Mining Laboratory	10,000
Total	$725,000

Payment of this might be spread over a term of years.

2. What the Provincial Government might do at a future date:

A new building will be required at no distant time either for Physics or for Biology. The present Physics building is not wholly suitable for this purpose, for the basement is occupied by the Department of Mineralogy, and there is available, therefore, no sufficiently secure base for delicate instruments. If Physics were provided with a new building, Biology might occupy the present Physics Building.

A new Mining Laboratory will be eventually necsesary. The present frame building dates from 1894.

3. What Queen's University can do for itself through private aid:
- Students' Union.
- Skating Rink.
- Extension to Gymnasium.
- Men's Residences.
- Amounts already secured or in sight for Library and Women's Residence, $281,000.

4. *School of Agriculture.* Should the Government at any time feel disposed to undertake instruction in Agriculture in Eastern Ontario the work could be conveniently carried out in Queen's University. The present laboratories would serve for the purpose, and a very slight addition to the present staff would allow quite an elaborate scheme to be carried out by the Government at a minimum expense.

II. *Maintenance Grant, 1921-1922.*

1. Existing Provincial Grant	$165,000
2. Estimated deficit for year ending March 31, 1922	54,000
3. Additional staff	8,000
4. Increased salaries	52,000
5. Equipment	10,000
6. Repairs and contingencies	15,000
7. Library, cataloguing and additional purchases	4,000
8. Improvement of Summer School	5,000
9. Improvement of Extra-mural work	3,000
10. General Extension work, not for degree	4,000
11. Commerce, including Engineering and Commerce	4,000
12. Research and Scholarships	20,000
	$344,000

COMPARISON OF UNIVERSITY REQUESTS.

Building and Other Capital Expenditure Extended over a Term of Years.

The University of Toronto (including $300,000 for College of Education)	$4,450,000, or 69%
Western University	1,300,000, or 20%
Queen's University	725,000, or 11%

Maintenance

	1921-22.	Future.
University of Toronto	$2,000,000	rising to $3,000,000 in 10 years.
Western University	200,000	rising to 320,000 in 5 years.
Queen's University	344,000	and 15% of the total Provincial maintenance grant thereafter.

Of the total sum asked for maintenance for 1921-22,

The University of Toronto requests	78%
Western University requests	8%
Queen's University requests	14%

For the ensuing five years Queen's University requests an annual maintenance grant of 15% of the total Provincial appropriation, provided by statute or by special vote, for the maintenance of higher education.

APPENDIX I.

MEMORANDUM OF LEGISLATION RELATING TO QUEEN'S UNIVERSITY AT KINGSTON

SHOWING

"The essential terms of the original Charter of the University and any modifications subsequently made."

The Royal Charter.

1. By Royal Letters Patent, sealed at Westminster on October 16th, 1841, "Queen's College at Kingston" was established as a body politic and corporate pursuant to the declaration in the preamble of the Charter that "the establishment of a college within the Province of Upper Canada, in North America, in connection with the Church of Scotland, for the education of youth in the principles of the Christian religion, and for their instruction in the various branches of science and literature, would greatly conduce to the welfare of our said Province." The corporators were the Ministers and members of the Presbyterian Church of Canada in connection with the Church of Scotland, and the Board of Trustees was to consist of twelve ministers and fifteen laymen of the said Church. A religious test was required of the trustees, principal, and professors, but there was express provision that no such test whatever should be required of students either upon admission or graduation, except in the one case of admission to a "degree of divinity." The College was to be "deemed and taken to be a University," with power to confer degrees, and it was to have the right to hold property and to receive any money or gifts whatsoever. A College Senate was to be appointed for the exercise of academical superintendence and discipline, but the "Government of the Corporation" lay with the trustees.

Estate and Liabilities of University at Kingston Transferred.

2. Chapter 89 of 9 Vic. (Province of Canada) (1846) merely transferred to and vested in Queen's College at Kingston all the estate real and personal and all the liabilities of the University at Kingston, which had been incorporated by an Act of this province in the 3rd year of Her Majesty's reign subsequently disallowed.

Continuance of Relation to the Presbyterian Church in Canada. Establishment of the University Council. No Church or Religious Qualifications for Elective Members.

3. Chapter 76 of 38 Vic. (Ontario) (1874) provided for the continuance of the College in the same relation to the new "Presbyterian Church in Canada" (formed by the union of certain Presbyterian Churches) as it then held to the Presbyterian Church of Canada named in the Royal Charter. This statute also declared that the right to hold property should not be limited by any statute of mortmain; and, as the first step in the widening of the institution, it provided for a "University Council," consisting of the trustees, the members of the College Senate and a corresponding number of graduates or alumni to be appointed in the first instance by the Board of Trustees and Senate, but thereafter to be elected by the whole body of graduates and alumni under by-laws to be framed by the Council itself. No qualification as to Church membership or religion was required for the elective members. This Council was empowered to elect the Chancellor, but was given no right to assume any part of the control of the University except as an advisory or consultative body.

Confirmation of above Ontario Enactment by the Dominion Parliament.

4. Chapter 123 of 45 Vic. (Dominion) (1882) was enacted by the Dominion Parliament for the express purpose of settling doubts as to the validity of the last mentioned Ontario statute, and of giving full sanction to everything done. In terms it re-enacted the provisions of the Ontario statute and confirmed and declared valid anything done under and by virtue of that enactment.

Addition of Representatives of the University Council to the Trustee Board without requirements as to Church Connection. Relaxation of Religious Test for Professors.

5. Chapter 103 of 52 Vic. (Dominion) (1889) made a more important change by altering the constitution of the actual governing body of the University to provide for the election of a trustee annually by the University Council free from any requirement as to Church membership or religious declaration whatsoever. A trustee so elected was to hold office for five years, and five such trustees were thus in time added to the Board. This statute also left to the Board itself the prescription of the religious test for professors other than those of the Theological Faculty of the College. Broader powers to acquire and hold property were also conferred subject to Provincial laws.

Further addition to the Trustee Board of Representatives of the Graduates without regard to Church Connections.

6. Chapter 152 of 6 Ed. VII (Dominion) (1906) still further lessened the charter restrictions imposed upon the membership of the Trustee Board by providing for the election by the graduates of five trustees "without regard to their Church connections."

Complete Severance from the Church. Nationalization of the University.

7. Finally by Chapter 138 of 2 George V (Dominion) (1912) the College freed itself absolutely from any Church control, abolished all religious tests and restrictions save the one that it should remain distinctively Christian, became national in constitution as well as in character and work, and assumed the name more in keeping with the facts—"Queen's University at Kingston." The Board of Trustees as now constituted included the Chancellor, the Rector, the Principal, a member appointed annually by the Governing Board of each affiliated College, six members elected by the University Council, six by the graduates, four by the benefactors, and twelve by the Board itself. (Provision for the inclusion of the Minister of Education and of an Assessor to be appointed by him was repealed by Chapter 141 of 4 George V (Dominion) (1914). There were added by Chapter 62 of 6-7 George V (1916) infra when the School of Mining and Agriculture was merged in the University, six trustees appointed by the Governors of that school and four more to be appointed by the Lieutenant-Governor in Council of Ontario.) The management and discipline of the University was expressly freed from all denominational restrictions. Its Faculty of Theology disappeared, to be succeeded at once by a separate institution, incorporated by Act of the Dominion Parliament assented to on the same day, under the name "Queen's Theological College," for which the Statute (Chapter 138) provided building accommodations and an endowment of $200,000.00, both from the resources of the University, pursuant to an arrangement which recognized the sources from which the original endowment of Queen's was chiefly derived.

Complete Separation of the Theological College.

8. Chapter 139 of 2 George V (Dominion) (1912) incorporated Queen's Theological College above mentioned as the successor of the Faculty of Theology in Queen's College at Kingston, provided for a Board of Management, to be appointed by the General Assembly of the Presbyterian Church in Canada, defined the powers of this College, enabled it to confer degrees in divinity, and placed it in relation to the University as an affiliated body only.

FACULTY OF APPLIED SCIENCE.

SCHOOL OF MINING AND AGRICULTURE.

Incorporation. Affiliation of the School with the University.

1. By declaration filed pursuant to the Act respecting Benevolent, Provident and other Societies, the School of Mining and Agriculture was incorporated on the 5th of January, 1893, "for the training and education of students and more particularly of miners, prospectors, farmers, artisans, mechanics and workingmen, to whom instruction may be given in the various branches of chemistry, mineralogy, metallurgy, mining and assaying, in agriculture and related subjects, in veterinary science, in navigation, in civil, electrical and mechanical engineering and architecture, or any other departments of applied science."

In accordance with the plans of its corporators the School was then organized and carried on in affiliation with the University.

Confirmation of Incorporation and Additional Powers Given.

2. By Chapter 115 of 56 Vic. (Ontario) (1893) this incorporation was confirmed, capital stock was provided for, powers to acquire and hold property, and other powers were conferred and municipalities were enabled to grant aid.

Additional Powers: Aid from the Province.

3. Chapter 44 of 1 Ed. VII (Ontario) (1901) declared that great and substantial benefits had resulted to the Eastern part of the province from the establishment of this School, granted certain additional teaching powers, made further provisions as to stock subscriptions and transfers, and to facilitate the giving of aid by township municipalities, and granted from the Consolidated Revenue Fund of the province $22,500 per annum for five years towards the erection of buildings and carrying on of the work of the School.

(Relation of the facts concerning the various grants from the province to this School and to the University is not within the scope of this memorandum, but because the statute last cited is the only enactment dealing exclusively with this School which makes mention of contributions from the province it should be noted here that this School was established on an understanding reached with the then Premier of Ontario, Sir Oliver Mowat, that Provincial grants would be available; and that since that time the School has been in receipt of annual Government contributions which have gradually increased with the growth and needs of the institution.)

Addition to the Board of Governors and Representation by the Province.

4. Chapter 162 of 9 Ed. VII (Ontario) (1909) increased the capital stock of the corporation and provided for the addition of four Governors to be appointed by the Lieutenant-Governor in Council, four to be elected by the graduates and four to be appointed by the stockholders.

Amalgamation with and Merger in Queen's University. Faculty of Applied Science.

5. Chapter 110 of 6 Geo. V (Ontario) (1916) ratifies and confirms an agreement by the terms of which the School of Mining and Agriculture was amalgamated with Queen's University at Kingston and merged therein; the School becoming the Faculty of Applied Science of the University; its shareholders being added to the list of benefactors of the University; its assets becoming vested in, and its liabilities assumed by, the University; and provisions being also made for the addition of six trustees to the Board of Trustees of the University, to be appointed by the then Board of Governors of the School, and for the continuance of the right of appointment of four governors, as members of the Trustee Board, by the Lieutenant-Governor in Council. All the powers, rights and privileges of the School became vested in the University.

Amalgamation Confirmed by Dominion Parliament and Provision for Above-mentioned Additional Trustees.

6. By Chapter 62 of 6-7 Geo. V (Dominion) (1916) the Dominion Parliament confirms the same agreement of amalgamation and makes the necessary amendments in the Dominion Statute of 1912 to provide for the additional trustees named in the last paragraph.

FACULTY OF MEDICINE.

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS.

Incorporation.

Chapter 137 of 29-30 Vic. (Province of Canada) (1866) incorporated "The Royal College of Physicians and Surgeons of Kingston," and granted it all the rights and privileges conferred on the colleges named in "The Medical Act for Upper Canada" or in any other Act referring thereto. Power was given to affiliate with any university having power to grant degrees in the province, and power was given for any such university to affiliate the college and to grant appropriate degrees.

Affiliation. Establishment of Medical Faculty.

Affiliation with Queen's followed at once, and this relation continued until 1892, when the Board of Trustees of the University appointed a Faculty of Medicine. This faculty, arising from the corporation mentioned, while now academically a constituent part of the University, nevertheless continued an independent administration of its finances subject only to certain stipulations it had given relating to the efficiency of equipment and maintenance. In 1902 some modification took place in this arrangement, and in 1913, the year following the final radical alteration in the University's constitution, the Medical Faculty amended its own constitution, threw in its lot completely with the University financially as well as academically, and was adopted and became, as it is now, an integral part of the University as the Medical Faculty of Queen's University at Kingston.

RECAPITULATION.

The University, originally closely linked with the Presbyterian Church, yet always holding its doors open to all denominations and numbering all denominations among its students and graduates, from time to time broadened the constitution of its governing body and relaxed the bond to the Church, in natural conformity with the growth of its own constituency and the rapid extension of its work and sphere of influence, until in 1912 it freed itself from the last vestige of Church control and became with its Faculties of Arts, Medicine and Science absolutely undenominational.

APPENDIX II.

REPLACEMENT VALUES OF BUILDINGS, FURNITURE AND EQUIPMENT.

Mechanical Laboratory, 6,960 sq. ft. floor area:			
Cost, 1907	$7,375 62		
Value, 1914	9,219 52		
Value, 1920		14,751 24	
Equipment		8,600 00	
Total			$23,351 24
Grant Hall, 10,300 sq. ft. floor area:			
Cost, 1905	45,115 44		
Value, 1914	56,394 05		
Value, 1920		112,788 10	
Furniture		10,000 00	
Total			122,788 10
Carruthers' Hall, 14,520 sq. ft. floor area:			
Cost, 1912	29,504 69		
Value, 1920		59,009 38	
Equipment		8,000 00	
Total			67,009 38
Skating Rink, 17,000 sq. ft. floor area:			
Value, 1912	9,500 00		
Present value		12,000 00	
Total			12,000 00
Curling Rink:			
Value, 1912	7,342 42		
Present value		8,000 00	
Total			8,000 00
Observatory:			
Cost, 1912	6,113 92		
Present value		12,227 84	
Equipment		2,000 00	
Total			14,227 84
Old Medical Building, 11,400 sq. ft. floor area:			
Cost with rebuilding, 1901	18,000 00		
Value, 1914	22,500 00		
Present value		44,500 00	
Furniture and equipment		15,000 00	
Total			59,500 00

Old Arts Building, 23,400 sq. ft. floor area:			
Cost, 1880	$52,422 31		
Value, 1914	65,552 88		
Value, 1920		$131,105 76	
Furniture		10,000 00	
Books		400,000 00	
Botany Dept., equipment		4,000 00	
Museum Specimens		20,000	
Total			$565,105 76
New Arts Building, 35,430 sq. ft. floor area:			
Cost, 1904	69,944 23		
Value, 1914	87,430 29		
Value, 1920		174,860 58	
Furniture		10,000 00	
Total			184,860 58
Nicol Hall, 14,200 sq. ft. floor area:			
Cost, 1913	70,374 20		
Value, 1920		140,748 40	
Furniture		5,000 00	
Equipment		20,000 00	
Total			165,748 40
Central Plant:			
Cost, 1904	22,360 62		
Value, 1920		50,500 00	
Total			50,500 00
Fleming Hall, 30,400 sq. ft. floor area:			
Cost, 1904	61,000 00		
Value, 1914	76,250 00		
Value, 1920		152,500 00	
Furniture		4,000 00	
Electrical equipment		15,000 00	
Mechanical equipment		14,200 00	
Total			185,700 00
Ontario Hall, 41,200 sq. ft. floor area:			
Cost, 1904	81,000 00		
Value, 1914	101,250 00		
Value, 1920		202,500 00	
Furniture, Physics Dept.		5,000 00	
Equipment, Physics Dept.		25,000 00	
Furniture, Geological Dept.		3,000 00	
Equipment, Geological Dept.		4,000 00	
Geological Museum		30,000 00	
Mineralogy Dept., furniture		3,000 00	
Mineralogy Dept., equipment		4,000 00	
Total			276,500 00
Chemistry Building, 28,000 sq. ft. floor area:			
Cost, 1913	120,459 57		
Value, 1920		240,919 04	
Office furniture		1,000 00	
Equipment		15,000 00	
Total			256,919 04
New Medical Building, 12,900 sq. ft. floor area:			
Cost, 1908	62,000 00		
Value, 1914	67,500 00		
Value, 1920		135,000 00	
Furniture and equipment		35,000 00	
Total			170,000 00
Mining Mill (wooden building), 6,800 sq. ft. floor area:			
Cost, 1894	14,829 93		
Value, 1920		10,000 00	
Equipment		7,500 00	
Total			17,500 00

Gymnasium, 11,000 sq. ft. floor area:			
Cost, 1905	$29,000 00		
Value, 1914	36,250 00		
Value, 1920		$72,500 00	
Equipment		10,000 00	
Total			$82,500 00
Cafeteria, 5,000 sq. ft. floor area:			
Present cost	7,000 00		
Equipment		3,000 00	
Total			10,000 00
Residences, 25,000 sq. ft. floor area:			
Original cost, estimated	24,000 00		
Value, 1914	30,000 00		
Value, 1920		60,000 00	
Total			60,000 00

Value of Land.

Assessed at $148,250.00.	
Actual value about	222,375 00
Total value of Land, Buildings and Equipment	$2,554,585 34

APPENDIX III.

AMOUNT AND NATURE OF THE ENDOWMENT.

The Endowment of Queen's University at present amounts to $1,791,495.12.

Of this sum about $1,000,000 is invested in bonds and debentures and the rest in mortgages.

The following statement shows the sources of the endowment. The contributions for the most part have been in small sums from persons of limited means:

Source or Object.	*Date.*	*Amount.*
Michie	1867-1884	$ 6,000 00
New Chair in Theology	1867	1,163 22
Watkins' Bequest	1877	4,000 00
Kingston Ladies' Scholarship	1878	707 00
Robert Sutherland	1878	11,738 66
Spence Bequest	1881	3,427 70
Greenshields Bequest	1883	5,000 00
Sir John A. Macdonald Chair	1889	22,558 90
Nichols Bequest	1891	20,000 00
Fulton Bequest	1892	3,000 00
Roberts Bequest	1893	40,000 00
Doran Bequest	1893	22,384 31
Malloch Bequest	1894	2,000 00
Five Years Fund	1896	23,539 92
Robert Waddell Tutorship	1898	2,500 00
Mental Philosophy	1899	5,681 28
Gowan Fellowship	1900	250 00
Century Fund	1901	35,893 33
'01 Fellowship	1903	1,938 08
1904 Endowment	1904	433,583 64
Jubilee Fund	1904	185,728 83
Fleming Coal Mine	1904	931 40
Chair in Botany	1905	3,000 00
British Columbia Scholarship	1905	115 00
Wallbridge	1906	1,000 00
Moral Philosophy	1906	50,000 00
Mrs. Jane Hunter	1906	2,000 00
Dufferin County Scholarship	1910	50 00

	Date.	Amount.
James Gillies—Arts	1910	$1,000 00
James Gillies—Theology	1910	1,000 00
Douglas History	1911	50,000 00
		$940,191 27
Less transferred to Theological College at Separation		200,000 00
		$740,191 27
School of Mining	1913	68,273 96
Douglas Pharmacy	1913	20,000 00
Longwell	1913	5,000 00
Nicol Hall subscriptions	1913 (to date)	721 92
Grant Hall, subscriptions		65 00
Not specified		685 55
Hoffman	1918	35,000 00
Interest on Douglas Endowment		5,468 75
1918-1919 Endowment		902,368 67
Hoffman	1919	3,500 00
Augmented Revenue		220 00
Douglas—Colonial History		10,000 00
		$1,791,495 12

APPENDIX IV.

REVENUE AND EXPENDITURE.

INCOME.

NOTE: The smaller income for 1919-20 in comparison with the estimated income for 1920-21 is due chiefly to the fact that part of the new Endowment Fund was received too late to give an interest yield in 1919-20. The financial year of the University extends from April 1 to March 31.

	1919-20 (Actual)		1920-21 (Estimated)	
Income from Students.				
Arts—				
Intra-mural	$23,906 18		$22,565 00	
Extra-mural and Summer School	28,326 65		30,000 00	
Applied Science	48,491 00		50,000 00	
Medicine	27,943 46		29,520 00	
Banking	15,438 50		12,000 00	
Graduation (all Faculties)	997 48		1,000 00	
		$145,103 27		$145,085 00
Income from Investments:				
Bonds, etc. (less Bank interest and scholarships)	$30,204 23		$45,000 00	
Mortgages	52,208 77		57,000 00	
Jubilee Fund	3 00		84 00	
Less cost of collection	$5,099 38		$5,000 00	
		77,316 62		97,084 00
Income from Grants by Province:				
Arts	43,000 00		43,000 00	
Science	67,000 00		67,000 00	
Medicine	15,000 00		15,000 00	
War Grant	....		40,000 00	
		125,000 00		165,000 00
Income from Other Sources:				
School of Navigation	603 68			
O'Brien Co., Ltd.	4,875 00		4,875 00	
Rents (including Hospital Commission)	7,140 52		3,000 00	
		12,619 20		7,875 00
		$360,039 09		$415,044 00

EXPENDITURE.

The estimated expenditure for the current year is based upon actual expenditure for the eight months from April 1 to November 30.

	1919-20 (Actual)		1920-21 (Estimated)	
Departmental Expenses: Teaching, Research, Laboratory and other supplies:				
Salaries—				
Winter Session	$195,866 63		$245,983 00	
Ordinary Summer Session	4,581 52		4,093 00	
Special Summer Session (Science)	17,000 00		....	
Douglas Tutorship	1,219 25		1,200 00	
Annuities	....		3,586 00	
		$218,667 40		$254,862 00
Expenses of Departments—				
Art	206 72		500 00	
Botany	185 80		750 00	
Chemistry	12,707 54		15,000 00	
Civil Engineering	1,590 89		2,500 00	
Electrical Engineering	423 96		1,500 00	
Mechanical Engineering	954 95		1,000 00	
Geology	134 57		400 00	
Medicine	12,703 40		16,000 00	
Mining and Metallurgy	7,500 35		8,000 00	
Mineralogy	524 42		750 00	
Physics	4,864 64		5,000 00	
		41,797 24		51,400 00
Research		6,216 67		7,500 00
Libraries: (Books)		7,296 31		7,600 00
Administration:				
Salaries (including Librarian)	27,417 90		30,000 00	
Advertising	2,529 71		3,300 00	
Printing and Stationery	11,400 00		11,750 00	
Stamps	3,599 50		4,000 00	
		44,947 11		49,050 00
Operation and Maintenance of Plant:				
Central Plant—				
Salaries	3,120 00		4,000 00	
Light, heat and power	14,286 10		31,000 00	
Janitors, etc.	9,334 00		11,000 00	
Observatory (light and fuel)	173 50		175 00	
Grounds	1,010 48		2,000 00	
Taxes	1,622 26		2,357 00	
Insurance	4,198 00		4,500 00	
Repairs	15,400 72		15,000 00	
		49,145 06		70,032 00
Miscellaneous:				
Travelling	3,142 16		6,000 00	
Contingencies	2,858 71		7,500 00	
Athletics	770 50		2,000 00	
		6,771 37		15,500 00
		$374,841 16		$455,944 00
Deficit		$14,802 07		$40,900 00

APPENDIX V.

NUMBER OF FACULTIES AND OF STUDENTS IN EACH FACULTY.

(The statement below does not include the affiliated institutions—Queen's Theological College, Dairy School, or School of Navigation—but only the three Faculties maintained out of the University Budget).

SESSION 1920-21.

Faculty of Arts:		
Intra-mural (including Summer School)	660	
Extra-mural	592	
Banking	360	
		1612
Faculty of Applied Science		396
Faculty of Medicine		240
		2,248
Less registered in two faculties		9
Total		2,239

APPENDIX VI.

COST PER STUDENT IN EACH FACULTY.

There are many different ways of making such an estimate, and widely differing results are to be obtained, according to the method employed. A charge against a student's education might include only salaries and administrative expenses, or it might add complete overhead costs for maintenance of the Plant, or it might even take into account the interest on the total investment in Buildings, Land and Equipment, and the interest on the endowment. The total cost may, therefore, be made very large or very small.

The method employed in the present calculation is to charge against the student's education the total operating expenses of the year. In the financial statement exhibited above under *Revenue and Expenditure*, the expenses of the last financial year are shown to be $374,841.16. This, then, is what it cost Queen's University last year to provide educational facilities for the students registered in the three Faculties of Arts, Science and Medicine.

The next problem is to apportion costs to the three Faculties. This is particularly difficult at Queen's, since by a very economical arrangement, to avoid duplication of equipment, no fewer than twelve Departments serve two or even three of the Faculties. The Department of Chemistry, with its own building, for example, provides instruction for students in Arts and Medicine as well as in Applied Science. It is very difficult to estimate what part of salaries or equipment or maintenance should be charged against each Faculty. A charge based on the mere number of students from each Faculty would give very misleading results.

The following table shows the calculations made by Mr. R. Easton Burns, C.A., regarding distribution of costs for 1919-20:

	Total.	Total cost per student.	Net cost per student deducting av'ge fees.
Faculty of Arts	$157,623 94	$180 00	$130 00
Faculty of Applied Science	*144,341 60	337 00	222 00
Faculty of Medicine	72,875 62	318 00	193 00
Total expenditure, 1919-20	$374,841 16		

APPENDIX VII.

THE COST OF ADMINISTRATION.

The cost of administration for 1919-20 was $44,947.11, or about 12% of the total expenditure. The details are shown under *Revenue and Expenditure* above.

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*This sum includes a special expenditure of $17,000 for a Summer Session for returned men in the Faculty of Applied Science.

APPENDIX VIII.

THE SCALE OF PROFESSORIAL AND ADMINISTRATIVE SALARIES.

Including a special bonus for 1920-21, the present range of salaries is as follows:

Administrative: Principal, $10,000; Vice-Principal, $750, in addition to his salary as Professor; Deans, $500, in addition to their salaries as Professors; Registrar and Treasurer (one officer), $4,500; Deputy Registrar, $1,800; Bookkeeper, $1,500; Librarian, $1,700; Assistant Librarian, $1,100; typists and stenographers, from $8 to $18 a week, averaging $12 a week; janitors and caretakers, $14 to $21 a week, averaging $18 a week.

Professorial: Professors who are heads of Departments, $3,500-$4,000; Professors not heads of Departments, $3,000-$3,200; Associate Professors, $2,500-$2,900; Assistant Professors, $2,000-$2,500; Lecturers, $1,600-$2,100; Demonstrators, Fellows, Tutors, $100-$1,200.

Not included in the above are two Professors in the Faculty of Medicine who are each receiving $5,000.

APPENDIX IX.

WHO QUEEN'S STUDENTS ARE.

A very small proportion of Queen's students come from homes of wealth. One of the distinctive services of the University has been to provide education at a relatively low cost for hundreds of young men and women from homes of moderate means. An analysis of the occupations of parents of students in the entering class of this year gives the following information:

Sons and daughters of farmers	70
Sons and daughters of professional men and officials of small means, like ministers, teachers, clerks, bookkeepers	103
Sons and daughters of men who work with their hands, like carpenters, blacksmiths, cheesemakers, tailors	72
Sons and daughters of merchants (grocers, druggists, etc.)	47
Parents' occupations not given	35
From homes of moderate wealth	7
	334

APPENDIX X

FACULTY OF APPLIED SCIENCE

GRADUATES SINCE 1900

For the significance of this Table see page 27

Date	Mining	An. & Ap. Ch.	Chem. Eng.	Ch. & Mineralogy	Min. & Geol.	Civil	Mechanical	Electrical	Power	San. Eng.	Physics
1900	2	......	......	......	1	1	......	......	......	......	......
1901	2	......	......	......	......	1	......	......	......	......	......
1902	5	......	......	3	3	......	......	3	......	......	......
1903	12	......	......	4	2	1	......	2	......	......	......
1904	8	......	......	2	2	4	......	2	......	......	......
1905	7	......	......	......	......	7	1	6	......	......	......
1906	7	......	......	......	2	1	1	7	......	......	......
1907	13	......	......	......	......	15	1	6	......	......	......
1908	10	......	......	......	4	10	1	7	......	......	......
1909	12	......	1**	2	4	10	3	8	2	1	......
1910	14	......	1	......	2	10	2	13	......	2*	......
1911	15	......	......	3	5	8	......	8	2	......	......
1912	29	......	1	3	2	21	2	4	3	......	......
1913	13	......	1	1*	1	28	8	6	1*	......	......
1914	9	......	2	......	......	22	7	13	......	......	......
1915	4	......	1	......	1	29	1	7	......	......	......
1916	3	......	1	......	......	21	2	4	......	......	......
1917	3	......	......	......	......	17	4	2	......	......	......
1918	......	......	4	......	......	8	1	2	......	......	......
1919	1	1	4	......	......	11	3	4	......	......	......
1920	4	3	6	......	1	9	3	3	......	......	1**
	173	4	22	18	30	234	40	107	8	3	1

Total number of graduates, 640.

PRESENT REGISTRATION, 1920-21

Year	Mining and Metallurgy	Anal. and App. Chem.	Mineralogy and Geol.	Chem. and Metallurgy	Civil	Mechanical	Electrical	Physics
4th	5	1	1	7	12	5	6	1
3rd	19	....	1	21	14	4	7	3
2nd	25	6	....	33	28	22	35	....
1st	10	12	1	26	19	21	39	1
	59	19	3	87	73	52	87	5

No courses indicated, 10.
Special courses, 2.
Total number registered, 1920-21, 397.

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* Courses discontinued.
** New course.

APPENDIX XI.

MEDICAL FACULTY (only).

1900 TO DATE.

From:—	Source of Students.	Distribution of Students.
Ontario	813	419
Quebec	22	19
Manitoba	14	21
Saskatchewan	61	72
Alberta	20	36
British Columbia	8	25
Prince Edward Island	4	1
Nova Scotia	13	10
New Brunswick	11	10
Newfoundland	10	10
United States	24	129
West Indies	46	20
British Guiana	10	7
Other Countries	16	30
Total	1,072	806

	Cities.	Towns.	Rural Districts.
Sources of Ontario students	289	147	377
Distribution of Ontario graduates	154	107	158

APPENDIX XII.

QUEEN'S REMARKABLE GROWTH.

That Queen's University has an assured future as an educational institution is made clear by the following figures, showing the increase in number of students since 1890:

Naturally the registration was greatly reduced during the years of the war, but the figures for this session and the last show that the remarkable growth interrupted by the war has been resumed. Notwithstanding the loss of the Faculty of Education, the registration for the present session is 250 above that for 1914-1915, the high point reached at the outbreak of the war.

Session.	*Registration.*
1889-1890	419
1899-1900	665
1910-1911	1,612
1914-1915	1,997
1915-1916	2,009
1916-1917	1,316*
1917-1918	1,227*
1918-1919	1,425
1919-1920 (including special Summer Session in Science for returned men)	2,703
1920-1921 (first year without the Faculty of Education)	2,247

The same story of steady growth is told by the following table, which shows the number of degrees conferred in the three Faculties of Arts, Science and Medicine since 1880.

---

* Years when the Great War reduced attendance.

GRADUATING CLASSES.

	M.A.	B.A.	B.Sc.	M.D.	M.B.	Total.
1880	3	6	...	13	...	22
1890	17	23	...	39	...	79
1900	15	47	4	21	...	87
1901	10	50	3	24	...	87
1902	19	60	15	31	...	125
1903	15	65	17	48	...	145
1904	18	62	18	42	...	140
1905	23	66	20	39	...	148
1906	22	67	18	47	...	154
1907	14	90	35	32	...	171
1908	20	85	34	48	...	187
1909	17	68	43	39	...	167
1910	24	83	42	35	...	184
1911	22	94	42	49	...	207
1912	19	80	66	23	27	215
1913	17	151	59	11	33	271
1914	12	144	62	27	54	299
1915	10	147	40	18	75	290
1916	7	100	26	34	73	240
1917	5	81	25	13	1	125
1918	4	85	14	38	...	141
1919	7	119	11	16	...	153
1920	19	112	30	58	...	219

The number of degrees grew steadily till 1914. For the next two years, as a result of the war, there was a falling off, but the last three years show a rapid increase, and there is no doubt that in two years more the University will be graduating larger classes than in 1914.

APPENDIX XIII.

QUEEN'S SERVICE TO THE PROVINCE.

The Province of Ontario should give adequate financial assistance to Queen's University because of her large contribution to the schools of the Province.

From the last report of the Minister of Education for the Province of Ontario the following facts have been collected:

Inspectors

Graduates of Queen's	58
Graduates of all other Universities	49

Staffs of Collegiate Institutes

Graduates of Queen's, including 14 Principals	146
Graduates of Toronto, including 25 Principals	272
Graduates of Western	3

Staffs of Collegiate Institutes, excluding Toronto

Graduates of Queen's, including 14 Principals	127
Graduates of Toronto, including 19 Principals	182
Graduates of Western	3

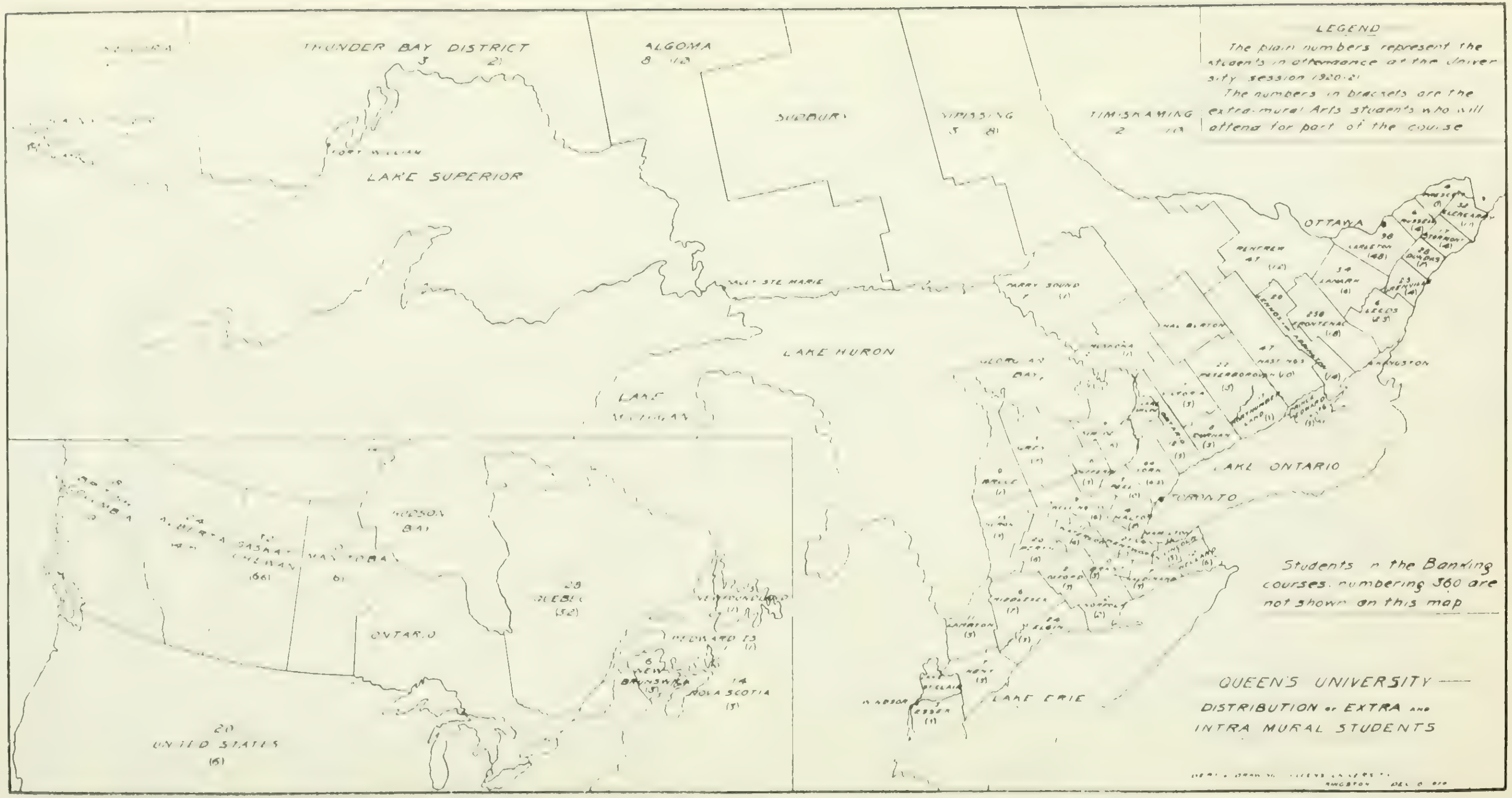
Staffs of High Schools

Graduates of Queen's, including 44 Principals	140
Graduates of Toronto, including 60 Principals	194
Graduates of Western, including 1 Principal	8

Staffs of Continuation Schools

Graduates of Queen's, including 26 Principals	37
Graduates of Toronto, including 11 Principals	23
Graduates of Western, including 1 Principal	1

The above statement shows that Queen's leads in the case of Inspectors and teachers in Continuation Schools, and contributes more than her proper proportion to the High Schools and Collegiate Institutes of the Province.

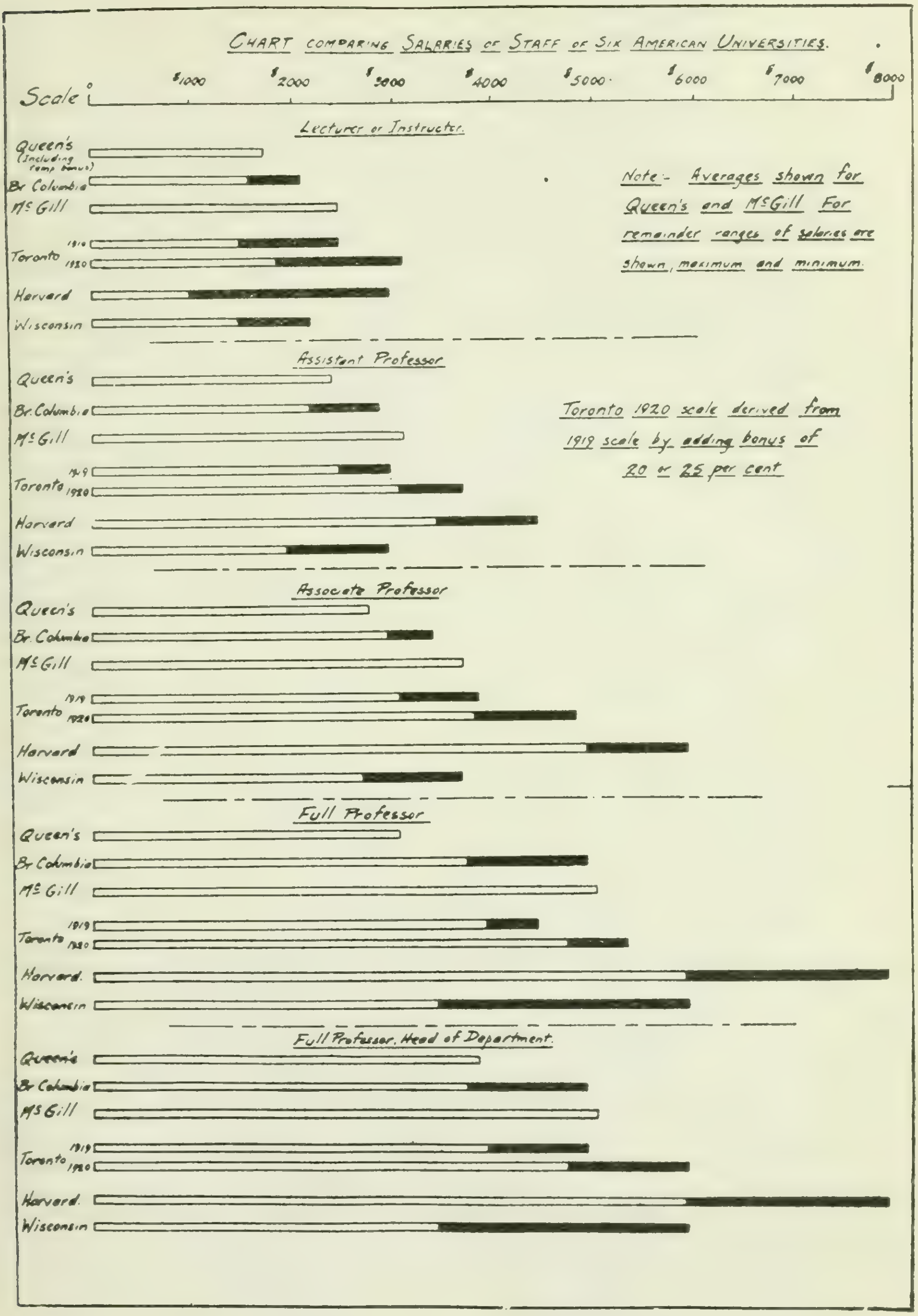


QUEEN'S UNIVERSITY —
DISTRIBUTION OF EXTRA AND
INTRA MURAL STUDENTS

LEGEND
The plain numbers represent the students in attendance at the University session 1920-21.
The numbers in brackets are the extra-mural Arts students who will attend for part of the course.

Students in the Banking courses, numbering 360 are not shown on this map

THUNDER BAY DISTRICT
3 (2)
FORT WILLIAM
LAKE SUPERIOR
ALGOMA
8 (12)
SUDBURY
NIPISSING
5 (8)
TIMISKAMING
2 (1)
SAULT STE MARIE
LAKE HURON
LAKE MICHIGAN
PARRY SOUND
7 (1)
GEORGIAN BAY
MUSKOKA
(1)
HALIBURTON
RENFREW
47 (12)
OTTAWA
98
CARLETON
(48)
PRESCOTT
(1)
RUSSELL
(4)
32
GLENGARRY
(1)
17
STORMONT
(4)
28
DUNDAS
(7)
53
GRENVILLE
(4)
LANARK
(6)
LEEDS
(23)
80
LENNOX AND ADDINGTON
258
FRONTENAC
(18)
KINGSTON
47
HASTINGS
(14)
22
PETERBOROUGH (10)
(5)
NORTHUMBERLAND
(1)
PRINCE EDWARD
(9)
VICTORIA
(5)
ONTARIO
(9)
DURHAM
(5)
SIMCOE
GREY
BRUCE
HURON
PERTH
WELLINGTON
YORK
PEEL
HALTON
TORONTO
LAKE ONTARIO
WENTWORTH
HAMILTON
LINCOLN
WELLAND
BRANT
OXFORD
HALDIMAND
NORFOLK
MIDDLESEX
ELGIN
LAMBTON
(3)
KENT
(3)
ST. CLAIR
ESSEX
(1)
WINDSOR
LAKE ERIE
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
(66)
MANITOBA
(6)
HUDSON BAY
ONTARIO
29
QUEBEC
(32)
NEWFOUNDLAND
(1)
PRINCE EDWARD IS
(1)
6
NEW BRUNSWICK
(3)
14
NOVA SCOTIA
(3)
20
UNITED STATES
(6)
KINGSTON



Note:- Averages shown for Queen's and McGill For remainder ranges of salaries are shown, maximum and minimum.

Toronto 1920 scale derived from 1919 scale by adding bonus of 20 or 25 per cent

APPENDIX VII

STATEMENT OF WESTERN UNIVERSITY

INFORMATION CONCERNING THE FACULTY OF ARTS

COLLEGE OF ARTS.

Like all the other universities of Ontario, the Western University owes its origin to the need of educational facilities for students in Divinity. Huron College, founded in 1867, was the training school for the Anglican clergy of the Diocese of Huron. At the suggestion of the Council and the Alumni of Huron College, Bishop Hellmuth procured, in the year 1878, from the Ontario Government a charter for a University to be known as the Western University of London, Ontario. The first meeting of the Senate as constituted by the Act was held on May 1, 1878, and an energetic campaign for the raising of funds in Canada and England was at once prosecuted by the Bishop. The intention being to combine the Faculties of Arts and Divinity under one management, the Principal of Huron College became ex-officio Provost of the Western University. The property of the former was handed over in trust to the Senate, and the Hellmuth Boys' College, with the whole square, on the corner of which St. John's Church now stands, was purchased for the use of the combined institutions. On October 6, 1881, the University opened its classes. In June following, a Medical Faculty was formed by twelve of the leading physicians in the city, and entered into affiliation with the University, proper accommodations having been provided in the building. Until 1884 the financial prospects were encouraging. Considerable sums were raised by the energetic Bishop Hellmuth, and only about $19,000 of the purchase price of the University remained on mortgage. But in that year a disaster befell the young institution. The guiding and sustaining hand of Bishop Hellmuth was withdrawn when he removed to England and resigned the Chancellorship. Subscriptions ceased to flow in, and the Senate decided to put the property up for sale and remove the classes to the old Huron College Building. Then followed another blow when the Huron College Council, in alarm, withdrew from affiliation with the University. It was found necessary to close the doors to students in Arts. For ten years the Senate continued to meet occasionally and struggle with their difficulties; but they were unable to avert the loss of nearly all their property when, in 1894, they were obliged to hand it over to the Star Life Assurance Co., which held the mortgage.

During the ten years following the resignation of Bishop Hellmuth in 1884, the work of the Arts Department was suspended. In 1886 the Middlesex Law Society established a school in affiliation with the University for the teaching of Law to students seeking admission to the legal profession. A staff of able lawyers gave their lectures free, and for a time the undertaking promised well. But when the Law Society of Ontario refused to accept the results of any examinations except their own, the attendance at the lectures fell off, and in two years the effort was abandoned. During these ten years the Faculty of Medicine remained in active and successful operation.

In the meantime, the authorities of Huron College had become convinced that without an Arts Department it would be impossible to maintain a Divinity School. The Council of the College, and finally Bishop Baldwin, were now disposed to make concessions, and in September, 1895, a new affiliation was entered into, thus enabling the Senate to revive the Arts Department.

Now follows a period of thirteen years during which the University maintains a desperate struggle for existence. Its denominational character excluded it from civic or provincial support. On the other hand, though the members of the Senate were Anglicans, it had no organic connection with the Synod of the Diocese, and could not receive the official sanction and support of the Anglican Church. One financial agent after another was sent out to canvass for funds, but in spite of the strictest economy each year showed a deficit in the finances. Gradually the conviction grew stronger, especially among the lay members of the Senate, but all connection with the Church must be given up. At length the most determined opponents of the movement had to yield to the logic of facts, and it was decided to seek such legislation as would enable the Council of the City of London to make the University an annual grant. Conditionally upon the making and continuing of this grant, the Senate adopted a new constitution, legalized by Act of the Provincial Legislature, April, 1908. By this Act the control of the University is vested in a Board of Governors, consisting of four members nominated by the Government, four by the City Council, and four chosen by these eight.

This placing of the University on an undenominational basis opened a new and more prosperous era in its history. Not only has the City of London more than fulfilled its original agreement, but the Province has aided the institution directly and indirectly. The Hygienic institute, with its excellent building and equipment, was placed under the control of the Board of Governors, and is now a Faculty of the University. In 1914 the Government first recognized the claims of the Western to a measure of provincial support by making it an annual grant of $10,000,000. With these added resources the University has been able to make great improvements in its general equipment. A dozen new members have been added to the staff of the Arts Department alone. Physical, Geological and Biological Laboratories have recently been installed. The Library, in addition to a liberal annual grant for the purchase of new books, has been singularly fortunate in receiving a donation from the well-known bibliophile, Dr. Barnett, his valuable collection of over forty-five thousand volumes.

AFFILIATION.

Three colleges are formally affiliated with the Western University in accordance with an article in the University's Act of Incorporation.

The original relation of Huron College and the University is now reversed, the College now being affiliated to the University. The students enrolled in the former institution take certain courses in the College of Arts concurrently with their theological courses, graduating in both Arts and Theology after a term of years.

In the autumn of 1919 two Catholic Colleges entered into affiliation. These, unlike Huron College, are engaged in the teaching of Arts subjects. One of these institutions, a college for men, is situated at Sandwich, Ontario; the other, a college for women, at Chatham, Ontario. The authorities of both have purchased plots totalling forty acres adjoining the new campus of the Western University, and purpose building as soon as the University begins the erection of its buildings. Indeed, the Ursuline College of Chatham will move its Arts Department to London in the summer of 1921, occupying temporary accommodation until its new buildings are completed. These two Catholic colleges have enrolled this year fifty freshmen, who, in virtue of affiliation, are students of the Western University. With the single exception of the special concessions in History and honor Philosophy made for Catholic institutions, the agreements of affiliation are such that any other Arts College can be affiliated on the same basis. The model followed in this respect is the arrangement made by Act of Parliament of the Province of Ontario between the University of Toronto and St. Michael's College, Toronto.

SUMMER SESSION OF THE COLLEGE OF ARTS.

In July and August of 1918 the first Summer School of the College of Arts was opened. The enrolment was sixteen. In 1919 the number was increased to twenty-four, and in 1920 to thirty-five. Seventy-five per cent. of the students attending these sessions are teachers who may be classified thus: those who are entering upon University work for the first time, those who are aiming to qualify for more advanced certificates of the Department of Education, University graduates who desire to take certain subjects which they were unable to take while undergraduates.

UNIVERSITY EXTENSION.

For several years the Faculty of Arts have had an Extension Committee, which has arranged for a series of popular lectures to be delivered during the winter months in London and outside points. The speakers have been in large part members of the staff, the minority being visitors from other institutions in other places. The lectures have numbered from sixteen to twenty per year. This year, in answer to a strong demand, the programme is to be extended, and, among other additions, lectures and courses for workmen are to be given in collaboration with the Trades and Labor Council of London. It is also planned to include lectures and demonstrations on music and the fine arts in the courses offered to the general public.

At the beginning of the present year the Extension Committee of the Faculty of Arts has united with the corresponding committees of the Faculties of Medicine and Public Health to form a University Extension Board, which is to have oversight over the activities of all three committees to facilitate the exchange of professors among the extension courses of the faculties, and to formulate plans for systematic expansion, so as to enable the University to serve as adequately as possible all districts and classes of its constituency.

LIBRARY FACILITIES IN GENERAL.

The Library Board of the Western University, under the guidance of its Chairman, Dr. C. C. Waller, has a strong and progressive policy which is being put into effect with unusual directness and vigour. The Chief Librarian is a University graduate who has been trained in a Library School; one of her assistants has also received special training; while the others have had practical experience covering two or three years. The staff are engaged in classifying and cataloguing, according to the best approved modern system, all the books in the possession of the University. Six thousand volumes have already been dealt with.

In addition to the books in the Barnett Library there are about thirteen thousand in the College of Arts, School of Medicine, Institute of Public Health and Huron College. the affiliated Divinity School of the Anglican Diocese of Huron. This makes a total of sixty thousand volumes available in the University. Also at the disposal of students are the forty-five thousand books in the Public Library of the City of London.

The Library is one feature of the University in which the citizens are showing a genuinely practical interest. Recently several citizens have promised to give their libraries, most of them unique in some particular, as soon as arrangements can be made for the actual transfer. Thought is now being given to the possible acquisition by the University of a part of the library of the late Mr. Shenley. the Engineer of the Hoosac Tunnel, whose home is close to London, and of the very valuable Whitman library left to the members of his family by the late Dr. Bucks, Walt. Whitman's literary executor. who was a resident of London for many years.

NOTE.—Since the foregoing paragraphs were written, the Carnegie Institution has decided to make the Western University a depository of all of its publications.

BARNETT LIBRARY.

The figures relating to the Barnett Library represent only the original cost of the books. No attempt has been made to put a market valuation upon the collection, although it contains hundreds of rare volumes and pamphlets which, if put upon the market, would be readily sold at high prices.

The Barnett Library was presented to the Western University in 1918 by Mr. J. Davis Barnett, of Stratford, Ontario, who was for many years Mechanical Superintendent of the Grand Trunk Railway. Mr. Barnett, now a man in his seventieth year, has made the collection of this Library the main object of his thought and effort for sixty years, and so broad has been his view of the field of human knowledge and so discriminating his judgment, that the Library is of genuine service to scholars in virtually all departments of study.

Certain sections of the Library, however, are almost unique in their completeness; the collection of Shakespeariana, for instance, is the best in Canada, and is very favourably known in other countries. Again, in respect of Canadiana, the Barnett Library ranks high among Canadian collections, including even those in the Parliament Buildings of the various Provincial Capitals.

RESEARCH.

Several members of the staff of the College of Arts are engaged in research and publication in addition to teaching.

Professor A. D. Robertson is conducting special investigations into the breeding of oysters for the Fisheries Department of the Dominion Government.

Professor N. C. Hart is investigating certain problems in plant physiology, especially in their bearing upon Economic Botany.

Professor E. G. Sturdevant will shortly publish a monograph on a certain phase of physical and electro-chemistry, the work having a special relation to industrial chemistry.

Professor J. W. Russell is a practical Geologist, having been engaged for years in operating silver mines with success in the Cobalt district.

Professor W. F. Tamblyn is a prolific investigator and writer in the field of English literature.

Professor Fox publishes frequent original articles in the Field of Classical Archaeology and Literature.

Professor Dorland has just contributed to a large volume on the History of the British Empire.

Mr. Fred Landon is doing diligent and brilliant research work in American and Canadian History, especially in the field where the United States and Canada have had a pronounced influence upon each other.

Professor L. P. Shanks has recently published a critical volume of great worth upon Anatole France, and has already secured a publisher for a two-volume work upon Balzac. He contributes critical essays frequently to the literary magazines of the best class.

The literary and historical productions of the staff are made possible through the strong Library equipment of the University.

BUILDINGS OF THE COLLEGE OF ARTS.

Since the time the College of Arts originated in Huron College the former has been housed in the buildings of the latter. When, however, the College of Arts became non-sectarian, the legal relations of the two institutions under the same roof were changed. From that time onward Huron College has played the role of the landlord, renting various portions of its building to the Western University, with the result that at the present time it occupies only one-sixth of its own property. Both institutions are greatly hampered for lack of room.

ANNEX.

Owing to lack of space for many collegiate purposes in the Huron College buildings the Board of Governors have purchased, since the beginning of the term of 1919-20, a building on St. James' Street, about two hundred yards distant from the College property. This is known as the Annex. Here are now located the offices of the Librarian and the Faculty Supervisor of Athletics, the Library (with increased stack space), Library work-room, two or three classrooms. The acquisition of this property was imperative, even if it is to be occupied no more than a year and a half.

NEW CAMPUS.

The new Campus is a tract of two hundred acres situated about half a mile from the northern limits of the city. A street car line runs within a short distance of it. If a right of way can be secured at a certain point and the river bridged, it will be possible for one to reach the building in less than ten minutes after dismounting from the Richmond Street car. The Campus area lies on the north bank of the north branch of the River Thames, and slopes gradually to the water's edge. It is well wooded with pine and hardwood, and will lend itself to attractive landscape development. It is agreed by many that naturally it is the best Campus site in Eastern Canada. Forty acres of it are at present under lease to the London Hunt and Country Club, being used for golf.

A detailed survey of this area has been made and profiles taken and charted. Moreover, an expert architect has laid out a scheme for the relative location of all the buildings that will be required by the University for the next two centuries. It is the conviction of the present administration that this plan will prevent the disorderly and haphazard arrangement of buildings which has made so many university campuses unattractive and inconvenient. It is felt, too, that the choice of College Gothic architecture for the first buildings will establish a form of architectural style which succeeding administrations will follow, and thus insure a pleasing uniformity among all the buildings of the University.

NEW BUILDINGS OF THE COLLEGE OF ARTS, WESTERN UNIVERSITY.

The style of architecture of the new buildings to be erected on the Kingsmill Farm is the Collegiate Gothic. It is planned to erect at the outset at least two buildings—one for the administration, library, staff offices and classrooms for non-laboratory subjects, one for the four natural sciences. Plans for the first buildings are now being drawn, but no satisfactory exterior has yet been suggested.

The plans for the Science Building, with the exception of the front elevation, are practically complete, and the members of the Science staff are now engaged in plotting the arrangement of tables, benches, apparatus, etc.

GRANT OF THE COUNTY COUNCIL OF MIDDLESEX.

On June 8 the Council of the County of Middlesex granted the sum of $100,000 to the Western University toward the erection of the new buildings of the College of Arts. The gift is to be recognized by the placing of a tablet in the entrance of the new main building bearing the names of the Middlesex soldiers and nursing sisters who died in the Great War. This gift is significant chiefly in that it marks the beginning of the official co-operation of the counties with the City of London and the Ontario Government in the development and maintenance of the Western University. There is no reason to doubt that this action will be an example to the other counties of Western Ontario.

PRESENT SALARY SCALES IN THE ARTS FACULTIES OF CERTAIN CANADIAN UNIVERSITIES.

	Maximum.	Minimum.	Average.	Median.
Western:				
Professor	$3,000	$2,300	$2,512	$2,600
Associate Professor	2,500	2,000	2,250	2,250
Assistant Professor	.....	.....	.....	.....
Instructor	2,100	1,500	1,843	1,800
Toronto:				
Professor	5,000	4,000	.....	4,500
Associate Professor	4,000	2,000	.....	3,000
Assistant Professor	.....	.....	.....	.....
Lecturer	2,500	1,500	.....	2,000
Queen's:				
Professor	4,000	3,500	.....	3,750
Associate Professor	3,500	2,500	.....	3,000
Assistant Professor	.....	.....	.....	.....
Lecturer	2,400	2,000	.....	2,200
McGill:				
Professor	.....	.....	3,900	.....
Associate Professor	....	....	3,000	....
Assistant Professor	.....	.....	2,500	.....
Lecturer	.....	.....	1,700	.....
British Columbia:				
Professor	5,000	3,500	.....	4,250
Associate Professor	3,500	2,750	....	3,125
Assistant Professor (of instructorial grade).	2,750	1,500	.....	2,125
Instructor (of assistant's grade).	1,500	1,000	.....	1,250

INFORMATION CONCERNING THE WESTERN UNIVERSITY MEDICIAL SCHOOL

HISTORICAL.

At the suggestion of the late Bishop Hellmuth, at that time Chancellor of the Western University, the Medical Department of the Western University was organized in May, 1881. The school first opened on October, 1882, with thirteen students.

The University was unable to offer or obtain suitable working quarters for the new school, so that after a few years of instruction given in a five-room cottage the teachers themselves built the old school building on the corner of York and Waterloo Streets, meeting a part of the cost with students' fees and subscribing the rest themselves.

From its foundation up to the present time the Medical School has been a bona-fide department of the University, although no contributions for maintenance or support were obtained from the University until recent years. The first graduate from the University was from the Medical Department, and for several years this was the only department of the University in actual operation. Continuously from its foundation the Medical School has had available for teaching the material in the wards of the General Hospital, now Victoria Hospital.

In 1910 the Institute of Public Health was built by the Ontario Government to provide facilities for work particularly in Public Health. This Institute was opened to the students of the Medical Department of the Western University, beginning with the Session of 1911-1912, and since that time all courses in Chemistry, Pathology, Bacteriology and Public Health have been given there. Since its foundation the Institute has been an integral part of the University; its affairs have been administered by a committee of the Board of Governors, and funds for its maintenance and development have been provided by the Provincial Government.

In 1913 the Medical Department was reorganized, becoming, in fact, the Faculty of Medicine of the Western University, the Senate of the Western University being responsible for the work of the Faculty of Medicine, and the Board of Governors responsible for the financial affairs of the School. In the same year full-time professors were appointed in several departments. The number of full-time men has been increased so that in October, 1920, there will be six or seven instructors of professional rank engaged in the instruction of medical students (professors in charge of Physics, Chemistry and Biology are not thus included). The new building for the Medical School now under construction will provide thoroughly modern laboratories and adequate equipment for all of the work.

The Library of the Medical School, now well begun, will be provided with ample space and reasonable funds for development.

The total number of graduates of the Western University Medical School is five hundred and seventy-eight.

CLINICAL FACILITIES.

Beds Available.

Clinical teaching is carried on mainly in Victoria Hospital, an institution of 400 beds, about 200 of which are available for teaching. Plans for the enlargement of this hospital are being carried out.

Instruction in Psychiatry is given at the Ontario Hospital (for the Insane), where there are from 1,000 to 1,200 patients. Some of this material is occasionally used for instruction in internal medicine.

Work in practical Obstetrics is carried on both in the Lying-in Ward of Victoria Hospital and in the Bethesda (Salvation Army) Hospital. This latter hospital affords 75 beds devoted entirely to obstetrical cases. The members of the Department of Obstetrics and Gynaecology are the attending staff at this hospital.

Material for teaching is available, though seldom used, at St. Joseph's Hospital, the Alexandra Sanatorium, the Victoria Home for Incurables, and the McCormick Home for Aged People.

Work is beginning on a new Children's Hospital of 100 beds, to be under the control of the Board of Trustees of Victoria Hospital. This will provide ample facilities for clinical work in children's diseases. At present, material available in several children's homes is used for instruction in pediatrics.

Autopsies.

Autopsies are available at both Victoria Hospital and the Ontario Hospital. During the past few years there has been a total of only 40 to 50 each year, but an effort to secure more is being made, and with care it is expected that it will be possible to get from 75 to 100 at Victoria Hospital alone.

Remarks.

With the growth of the city the completion of the Children's Hospital and the enlargement of Victoria Hospital, it should be possible to centralize the clinical teaching in the institutions on Ottaway Avenue—the work in Psychiatry remaining, of course, at the Ontario Hospital, and the instruction in Practical Obstetrics being partially carried on at the Bethesda Hospital. This will leave untouched, so far as teaching is concerned, the material available in St. Joseph's Hospital, the Alexandra Sanatorium, the Victoria Home for Incurables, and the McCormick Home for Aged People. The advantage of centralized clinical teaching is obvious; but the material available in institutions not located on Ottaway Avenue could be used if the number of students demanded it.

Victoria Hospital.

Total number of beds	400
Number available for teaching	200

(Most of the clinical teaching is done in this hospital.)

This is a municipal institution. The professors and their assistants in the Faculty of Medicine of the Western University form the staff of this hospital.

Children's Memorial Hospital.

The excavation for this building will be begun within a few weeks. When completed this hospital will be under the same control as Victoria Hospital.

Total number of beds	100
Number available for teaching	50-70

Bethesda Hospital.

Total number of beds	75

These are devoted entirely to obstetrical cases.

The Salvation Army built and maintain this hospital. The members of the Department of Obstetrics and Gynaecology in the Faculty of Medicine of the Western University attend all of the ward cases in this hospital, the students attending each case in pairs.

Ontario Hospital.

This is a provincial institution for the insane. There are usually from one thousand to twelve hundred patients in this hospital.

The Superintendent and his Assistant are Associate Professors of Psychiatry in the Faculty of Medicine of the Western University, and the course in Psychiatry for final students is given in this hospital.

St. Joseph's Hospital.

This is a Catholic institution of 153 beds. Occasional use is made of clinical material afforded.

Alexandra Sanatorium.

An institution for tuberculous patients, under the control of the London Health Association. Average number of patients, 250 to 300. Occasional use is made of clinical material here.

Westminster Psychopathic Hospital.

A military institution. At present there are about 325 patients. The total capacity, when completed, will be 480 to 500.

Victoria Home for Incurables.

Supported partially by the City of London. Occasional use made of cases for teaching.

Number of patients	50 to 60

McCormick Home for Aged People.

Supported partially by the City of London. Occasional use made of cases for teaching.

Number of patients .... 80 to 85

Orphans' Homes.

Children's Shelter (Children's Aid Society).

Accommodation . ... 40 to 42 children.

Protestant Orphans' Home.

Accommodation . ... 55 children.

Mount St. Joseph.

Acommodation .... 135 to 145 children.

Salvation Army Children's Home.

In conjunction with Bethesda Hospital.

EXTENSION WORK.

Child Welfare.

For several years the members of the Department of Pediatrics have been active in the development of clinics for children, etc., in London and in several outlying towns and districts. An active pre-natal clinic has been established for several years in connection with Victoria Hospital.

Extension Lectures.

A number of extension lectures and demonstrations have been given each year by several members of the teaching staff. In some instances these were under the auspices of the University.

With the development this year of an all-University Extension Board, all lectures, demonstrations, etc., given by members of the teaching staff will be in the name of the University.

Nurses' Training Schools.

The Faculty of the Medical School has co-operated for a number of years in the giving of certain courses to nurses in the Training School of Victoria Hospital.

Occasional lectures are given to nurses in St. Joseph's and Bethesda Hospitals.

PLANS FOR DEVELOPMENT.

(*a*) Completion of new building and installation of equipment necessary for the teaching of classes of forty students. This should be accomplished by October, 1921.

(*b*) Completion of staff for session of 1921-1922:

Associate Professor of Physiological Chemistry (appointment made).
Associate Professor of Anatomy.
Associate Professor of Pathology.
Instructor in Pathology.
Instructor in Physiology (appointment made).

As the student body increases in size additional instructors in all departments will be necessary.

For the proper development of the Clinical work it seems probable that the appointment of a full-time man in Medicine, with assistance, will be advisable.

(*c*) Continued effort to aid in development of the *Out-Patient Department* of Victoria Hospital and the utilization of this department for teaching.

(*d*) Continued co-operation in the matter of the perfection of taking and preserving *case records* in Victoria Hospital.

(*e*) Co-operation in development of the *Clinic for Venereal Diseases* at Victoria Hospital under the Provincial Board of Health.

INFORMATION CONCERNING THE FACULTY OF PUBLIC HEALTH INSTITUTE OF PUBLIC HEALTH

INTRODUCTORY.

Establishment of Institute.

The Institute was established in 1912, and has since been maintained by the Provincial Government as (*a*) an aid to Medical Education; (*b*) for Laboratory Analyses, Diagnostic and Preventive; (*c*) for the Development and Teaching of Public Health; (*d*) for Research on Public Health lines. In fact, it is and has been a "Health Centre" of the more advanced type. With Victoria Hospital (400 beds) on the same grounds, the new Medical School just opposite and the new Children's Hospital to be located just next the Medical School, the Health Centre ideal is nearing completion. We believe this was, when established, the first institution of its kind in North America, as it certainly still is in Canada.

In its teaching capacity it has been established as the *Faculty of Public Health of Western University*—the first such Faculty in Canada.

Relations to Official Work.

In the Institute at present are housed the Provincial Board of Health Branch Laboratory, the District Health Officer of the Provincial Board of Health, the headquarters of the London Board of Health, and the headquarters of the Child Welfare Association.

Recently the Institute has been made a substation as well as a Branch Laboratory of the Provincial Board of Health. Here again the Health-Centre idea—the Province and municipality co-operating with the University—is carried out.

RESEARCH PUBLICATIONS.

Despite the heavy teaching and routine diagnostic and analytic work, the shorthandedness of the staff, especially during the war, and the pressure of official duties to the Province, district and municipalities, research has been kept steadily in view and accomplished as follows:

On Contagious Diseases.

1. Census of the Contagious Diseases of 8,786 Children. E. C. Henderson, B.A., Assistant in Vital Statistics. American Journal of Public Health, Vol. 6, No. 9.
2. Shorter Isolation Periods in Infectious Diseases. H. W. Hill, M.D., D.P.H. Director, Minnesota Medicine. March, 1918.
3. Influenza Amongst the Insane. F. W. Luney, M.D., Chief, Div. of Pathology. Awaiting publication. (Published in part.) Annual Report of Institute for 1918-19.

On Diagnostic Methods.

1. Colloidal Gold Test in Cerebro-Spinal Fluids. By G. A. Ramsay, Instructor, and Edward Fidlar, Chief, Div. of Pathology. Can. Medical Journal, August, 1916.
2. Cutaneous Tuberculin Test by Puncture with Solid Needle. D. A. Craig, M.D., Chief of Tuberculosis Division. A new method. Journal Medical Association, October 21, 1916.

On Syphilis Amongst the Insane.

The Blood and Cerebro-Spinal Fluids of the Insane. (A Study by Wassermann, Gold Chloride and other tests.) F. W. Luney, M.D., Chief, Div. of Pathology. Publication pending. Canadian Public Health Association Journal.

An Improved Method of Vaccination Against Smallpox.

Adopted in Military District No. 1 amongst the troops, and for civilians. Acupuncture the best method of Vaccination against Smallpox. H. W. Hill, M.D., D.P.H., Director. Canadian Medical Association Journal, March, 1916, British Medical Journal, February 10, 1917.

On Vital Statistics.

Fallacies of Existing Fatality Rates. H. W. Hill, M.D., D.P.H., Director. Canadian Medical Association Journal, March, 1913.

RESEARCH.

1. *Research in the Epidemiology of Tuberculosis.* The most neglected field of Epidemiology in all Public Health, as agreed by Frost, of Hopkins; Freeman, of Ohio, and others who know the Epidemiological situation. (Pearl, of Hopkins, under a grant from the National Tuberculosis Association, has been conducting some statistical researches of great extent, but with small regard to epidemiology.) In 1915 the Director of the Institute published an outline of researches needed in Epidemiology of Tuberculosis, but the war and other difficulties prevented any progress. The personnel and expenses required for one year would approximate $5,000, and $3,500 annually thereafter.
2. *Research in Pernicious Anaemia.* Personnel and equipment, $5,000; and $3,000 annually thereafter for four years.
3. *Research in Vital Statistics.* A great wealth of material derived from the London Board of Health work, conducted in the Institute; from the Child Welfare Association Clinics; from the Medical and Nursing Inspection of School Children in London, and from other like sources, has been accumulated, but without any assistant in Vital Statistics at present on the staff it is impossible to devote proper time to its investigation and correlation. Such an assistant, previously with the Institute, is again available, and the information now locked up could be made use of if this work were resumed. Salary and expenses, $2,500 annually.

UNIVERSITY EXTENSION WORK WHICH INSTITUTE SHOULD PARTICULARLY DEVELOP.

University Extension Work to be Done.

1. *Propaganda Work in Public Health.* Moving picture outfit and films, exhibit material, etc. We held, August 27, 1920, a very successful meeting for the Milk Producers' Association, demonstrating, with lantern borrowed from Physics Department, some still slides (very old) and plates, tubes, cultures, milk disc tests—all very modern. A movie film would have attracted a much larger attendance, and, if portable, could be carried out into the farmers' own districts. Personnel, equipment, travelling expenses, and advertising should require about $5,000 for this year, the definite end sought being the organizing of the people of the counties into county associations for the propagation of public health in their own homes, communities, townships and counties, thus forming a body of the people themselves banded together for this purpose throughout the western part of the Province, under University guidance.
2. *Museum of Permanent Exhibits* for teaching and demonstrating purposes.

GENERAL INFORMATION CONCERNING WESTERN UNIVERSITY

THE AMOUNT OF ENDOWMENT AND THE NATURE OF IT.

There is no general endowment available to the University at the present time.

The late Mr. J. B. Smallman left the sum of $200,000 to the University, subject to a life interest of his two sisters.

The various sources of Revenue, such as fees (including the amount for each student), Government grants (statutory and special).

The sources of revenue of the University at present are (the figures being for the term 1920-1921):

(*a*) Students' fees (estimated)	$26,400 00	
(*b*) Ontario Government grant (special)	79,000 00	
Ontario Government grant (from previous year)	5,000 00	
(*c*) City of London grant	55,000 00	
		$165,400 00

Explanatory:

(*a*) Students' fees—

Full Course, Arts, per annum	$50 00
Medicine, per annum	140 00
Public Health—	
Professional D.P.H.	140 00
Professional Public Health nurses (2 yrs.)	100 00

(*b*) There is no statutory grant from the Ontario Government, but a special grant has been made each year towards running expenses. During the war years an additional $5,000.00 was given. Last year this addition was withheld, but came to us this year, in addition to the $79,000.00 granted for the present year.

(*c*) The City of London has made an annual grant to the University each year since the Act of 1908 was passed, the amount being originally $10,000.00. In the Act there is a proviso that the city must contribute something towards the running expenses of the Institution. The amount of this year's grant, $55,000.00, is, roughly, a tax of one mill on the city's assessment.

For the five years beginning in the University year of 1913-1914, $5,000.00 a year was contributed by members of the Board and friends in the city.

THE VALUE OF BUILDINGS.

The work of the University is carried on in rented or donated premises, other than as follows:

The Arts Faculty uses a building on St. James Street, which was purchased at a cost of $6,500.00, plus $500.00 for alterations, in the year 1919. There is an encumbrance thereon of $5,000.00.

The Medical Faculty will, within the next few months, move into a new building now being completed for the University authorities, the cost of which, equipped, including land, will be in the neighbourhood of $440,000.00 to $450,000.00. This building is entirely paid for by a grant from the city of London and by private subscriptions.

The Faculty of Public Health is housed in a building erected by the Provincial Government in 1908, at a cost of $50,000.00. In 1910 the building was equipped at a cost of $10,000.00, and handed over to the University for operation.

The University was presented, in the year 1914, by a local athletic club with its Gymnasium and equipment. This building, being situated in the rear of residential property, would not be readily saleable, and is of little value other than for the purpose for which it is now used; it will be of no use to the University as soon as buildings are erected on the Kingsmill site.

NUMERICAL SUMMARY OF MEMBERS OF THE UNIVERSITY STAFF.

Faculty of Arts.

Active Staff (not including those absent on leave):

Professors	11	
Associate Professors	5	
Instructors	8	
Lecturers	7	
Curator	1	
Assistant	1	
	33	
Student Assistants in laboratories and libraries	8	
Technician	1	
Secretaries	2	
Add	33	
Total		44

Faculty of Medicine.

Full-time:			
Professors	4		
Demonstrator	1		
Laboratory Assistant	1		
Librarian	1		
Assistant Bursar	1		
Secretaries	2	10	
Part-time:			
Professors	5		
Associate Professors	6		
Assistant Professors	4		
Instructors	15		
Lecturers	4	34	
			44

Faculty of Public Health.

Full-time:			
Professors	2		
Assistant Professors	4		
Laboratory Assistants	5		
Secretaries	3	14	
Part-time:			
Instructors		9	23
			111

THE NUMBER OF FACULTIES AND THE STUDENTS IN EACH FACULTY.

(*a*) Three Faculties—Arts, Medicine and Public Health.

(*b*) Students:

College of Arts	214	
Ursuline College	19	
Assumption College	55	
Total Arts		288
Medicine		138
Public Health		108
Total in all Faculties		534

SCALE OF PROFESSORIAL AND ADMINISTRATIVE SALARIES.

Arts Faculty.

	Maximum.	Minimum	Average.	Median.
Professor	$3,000	$2,300	$2,512	$2,600
Associate Professor	2,500	2,000	2,250	2,250
Assistant Professor	2,100	1,500	1,843	1,800

Medical Faculty.

Full-time staff:
Professors—$4,000.
Assistants—$800 to $2,000.
Part-time staff:
Lecturers—$2.00 per hour.

Institute of Public Health.

Professor and Director of Institute—$6,000.
Professor and Assistant Director—$3,600.
Professor—$3,000.
Assistants—$1,800 to $2,500.

THE AMOUNT OF ASSISTANCE RECEIVED FROM PROVINCIAL GOVERNMENT FOR BUILDINGS WITHIN THE LAST FIFTEEN YEARS.

No assistance has been received from the Provincial Government at any time for buildings. The Institute of Public Health, which is now controlled by the University, was not originally built for the University. It was built in 1908, at an expenditure of $50,000.00, and equipped in 1910 at a further expenditure of $10,000.00.

THE PROSPECTIVE DEVELOPMENT OF THE UNIVERSITY IN BUILDINGS, EQUIPMENT, STAFF, STUDENTS, ETC.

The development of the University has been hindered by the lack of buildings and equipment, and the apparent lack of interest on the part of the authorities in Toronto, who have never, since 1908, provided in any year sufficient funds to carry on the work, making it necessary for money to be collected privately to make up deficits and to provide necessary equipment, etc.

The number and the class of students attracted to the Institution in spite of the inadequate facilities provided has always shown that there was a very large field open to the University if it could but be put on a proper basis.

In 1914 a campaign was planned not only for funds, but to arouse the interest of the people of the Western Peninsula, but owing to the outbreak of war it was abandoned. This campaign was being reinaugurated just prior to the appointment of the Royal Commission on University Finance, but since the occurrence of the slump in the financial world the campaign has been postponed until such time as your Commission issues its report.

With modern and adequate accommodation, the number of students will, in the estimation of those who have considered the situation in the western part of the Province very carefully, increase at an enormous rate yearly. Even under the adverse conditions existing at present, both in regard to the utterly unsuitable nature of the buildings used for the work and the fact that they are situated in various parts of the city, the student body in the Arts Faculty has increased at the rate of 66½ per cent. per annum for the past three years.

In the Medical Faculty the number of students each year has had to be controlled, and will continue to be controlled, the number having to be based not only on the facilities and equipment in the medical building itself, but on the clinical material available in the city, and it is not contemplated that the attendance at the Medical School will at any time in the near future be a large one.

In the Arts Department the increase cannot be controlled to the same degree, and is one that must be taken care of.

The University has a site of about 230 acres just outside of the city, where it is proposed to put up the necessary buildings for the Arts Faculty and possibly lease sites to the affiliated Colleges.

Close to the Hospital the University purchased a site, and has nearly completed thereon the erection of a medical building, which will take care of the requirements of that Faculty for possibly the next twenty-five years.

It is proposed to erect on the 230-acre site buildings to house—

1st.—The non-laboratory departments of the Arts Faculty (20 classrooms), offices for Administration, offices for Heads of Departments, Assembly Hall, Faculty Room, Cafeteria, Storage, and so forth.

2nd.—The Natural Sciences, including offices and laboratories of the Departments of Chemistry, Physics, Biology, Geology, and the Museums of these Departments.

3rd.—Library, including office, work room, reading rooms and so on.

4th.—Men students (dormitories).

5th.—Women students (dormitories).

6th.—Gymnasium.

7th.—Central heating station.

In addition, there will have to be a considerable amount expended on the site, to prepare the property to receive the buildings, and in order to erect a bridge across the river which separates the grounds from the city proper.

It is estimated that the cost of this construction, together with that of the Medical School, will reach a minimum of $2,250,000. With this accommodation the student body will gradually but rapidly grow, and the Teaching Staff will have to be enlarged to keep pace with it. The aim of the University Authorities is not to have a large and unwieldy student body in the University, but rather to provide an unusually high quality of teaching and educational privileges for students who will appreciate the opportunity for obtaining them.

According to the Western University Act of Incorporation of 1908, the Government of Ontario appoints half the Board of Governors and, with the city of London, directs the University's financial policy. The city of London is expected to make annual contributions toward the University's maintenance, while the several municipalities of Western Ontario, in co-operation with the Provincial Government and the city of London, direct its educational policy. While co-operation is implied, the responsibility for the University's development and maintenance would appear to rest with the Provincial Government.

The lines on which aid should be given to the Western University by the Province are:

A—For maintenance for the next five years—

1921-22	$200,000 00
1922-23	200,000 00
1923-24	240,000 00
1924-25	280,000 00
1925-26	320,000 00

The figure for 1921-23 will be sufficient to take care of a deficit of $24,349.00 carried forward from the present year. This deficit, which would have been very much greater had the Medical Building been ready for occupation in October last, as anticipated, was caused by the cutting down of the amount of the Government grant from $135,000.00 estimated requirement to $79,000.00, plus $5,000.00.

The amount asked for 1922-23 is the same as for 1921-22, for the reason that, the deficit being paid, an equal amount will give $24,000.00 to take care of estimated increases.

The amounts for the succeeding three years increase $40,000.00 annually, the minimum amount estimated to take care of increased attendance, staff and supplies.

B—For buildings

Required immediately.

The Government should contribute the following toward the erection of buildings:

1. Building for Arts Faculty to take care of all non-laboratory subjects (20 class rooms), small auditorium or assembly hall, offices of administration, offices for Department Heads, Faculty Room, storage, etc.	$600,000 00
2. Building for Arts Faculty to house Natural Sciences, including offices and laboratories of the Departments of Chemistry, Physics, Biology, Geology, and the Museums of these Departments, Storage, etc.	500,000 00
3. Library, including office, work and reading rooms, etc.	200,000 00
Total	$1,300,000 00

MEMORANDUM SUBMITTED TO THE PROVINCIAL COMMISSION ON UNIVERSITY FINANCES BY FRED LANDON, M.A., LONDON, ONT., ON BEHALF OF THE ARTS ALUMNI OF WESTERN UNIVERSITY.

To the primary function of a university, that of teaching students and developing their powers, there have been added in recent years two other functions that have vastly broadened the scope of university influence and that are apparently entering upon a period of very marked growth and development. These are research and university extension work.

Provision for research, which is the basis of graduate work, is at present sadly lacking in Canada. The federal Parliamentary committee which dealt with this subject last year, presented a report to Parliament that should have stirred to immediate action, but no action was taken. In our own province the need of proper facilities for graduate work has been repeatedly emphasized by President Falconer of the University of Toronto in his annual reports. The lack of such facilities is reflected in the number of candidates for the Ph.D. degree at the provincial university. In 1918 there were 27 students carrying on work for this higher degree, and in 1919 there were 28. Where are the scores of other recent graduates from our Canadian universities who are continuing their studies? The vast majority of them are in American universities. Graduates of Western University are going year by year to Columbia, Chicago, Cornell and other large American universities. The student lists of the graduate schools of these universities show that they are drawing in the same way from Queen's and from the University of Toronto itself. The pity of it is that these graduates, in perhaps a majority of cases, do not return to Canada. The two star men of my own year at Western went, one to Harvard and the other to Chicago. The man who went to Harvard is to-day professor of economic history in the University of Minnesota. The man who went to Chicago is head of the department of English in the Rensellaer Polytechnic Institute at Troy, N.Y. Year by year Canada suffers this drain of her best young minds.

The question might properly be asked, why has not proper provision been made before this at the provincial university, so that students from Canadian universities might not find it necessary to go to another country for their advanced work? The answer to this question would appear to be this, that the provincial university has been faced year after year by a constantly increasing enrolment of undergraduates. Providing for their needs has been so heavy a burden that there was neither time nor money for the post-graduate work. And under present conditions it would appear that this increase in the number of undergraduate students will show no falling off. If 5,000 students are enrolled this year, it is likely that a couple of years hence the number will be 6,000, and future years will see yet greater growth. Meanwhile post-graduate work will be halted just as it is halted to-day.

Various solutions might be offered for this situation, but the most effective way of dealing with the matter would appear to be to utilize the existing university machinery in the province outside of the provincial university, thus lessening the strain on the University of Toronto. There can be no valid objection to reducing to some extent the number of undergraduates in attendance at Toronto. The attendance at the provincial university, stated to be the largest in the Empire, is no doubt a matter of pride, but may constitute a source of weakness if the vast numbers prevent a real relationship existing between teacher and student. Moreover, if the provincial university is in a position to carry on post-graduate work in all main fields of knowledge, the other Canadian universities will year by year send many of their best men and women for work in lines in which they are not themselves in a position to offer advanced study.

University extension work is a second function of universities which is developing rapidly at the present time. In extension work a university must be close to the community it serves and in a position to understand its needs. It must be close to the people. In Ontario we have a geographical area so great that it is inconceivable that any one university could dream of meeting the wide and varied requirements. Old Ontario alone is as large as half a dozen of the northeastern states, it is almost as large as New York and Pennsylvania, and as large as Ohio and Indiana, as large as Virginia and South Carolina. The various states of the American union have found that not one but a number of extension centres are necessary to meet the needs of their people. Ohio has nine universities and colleges engaged in extension work, New York State has twelve, Michigan has three, Illinois five, and Massachusetts has twelve. Overlapping and duplication is avoided in various ways, chiefly by means of extension commissions.

Ontario's great area has, of itself, brought about natural divisions which are to some extent based on economic differences. Western Ontario, agricultural and industrial, thickly populated and centreing around London, is a section of the province which finds its problems different from those of Eastern Ontario. Eastern Ontario likewise finds itself facing problems that differ from those of Central Ontario, and Northern Ontario, of course, is a portion of the province unlike any of the other sections. In the field of extension work no university can serve Eastern Ontario so successfully as Queen's, as none can serve Western Ontario as well as Western. Toronto has ample scope for all its effort in Central Ontario.

Extension work is to-day being carried on, in a limited way, by all three universities in Ontario, each in its own field. The forms of extension work are varied, but include lectures, short courses, extramural work, library service, the summer school, etc. For work of this character there are large classes of the community that are receptive. Among the returned soldiers are hundreds of men who have a new appreciation of the value of education but are too old to start back to school. The shortening of hours of labor in industry has brought an increase in the amount of leisure time that may, by proper direction, be turned into channels decidedly useful to the state. The enactment of prohibition legislation is having a widespread influence upon the use made of leisure time, a fact which has been immediately rcognized by the American universities that are carrying on extension work. The foreign-born offer a fruitful field for university service. The extension of the suffrage to women has created a demand for instruction in public issues, in government, in economics, that the universities should meet. Then, among the young people of this province, there are thousands between the ages of fifteen and twenty-five who should be continuing their education, and that many of them are earnestly endeavoring to do so is shown by the attendance in night schools and by the business that is done by the International Correspondence Schools and similar organizations.

The presence of a university in Western Ontario will give a stimulus to every educational activity in this part of the province. It will raise the standard of teachers by enabling them to carry on university work extramurally and in the summer school. The libraries of Western University are to-day at the service of every teacher and every serious student in Western Ontario, with a minimum of restriction. Western University is capable of taking hold of extension work on a large scale, and, being situated in the very centre of Western Ontario, is close to every part of its constituency. The building up of this universtiy in Western Ontario will broaden the viewpoint and deepen the culture of a million people and increase their happiness. It will, at the same time, afford opportunity for an increasing number of young men and women from this district to secure the education that will enable them to take places of leadership and useful service in the future.

APPENDIX VIII

RESEARCH CONDITIONS, PROF. J. C. FIELDS, ROYAL CANADIAN INSTITUTE

Before the War there was no other country in the world where there were so many scientifically trained men as in Germany, no other country in which the Government did so much for science, and gave such recognition to research. Every university was a research institution and every member of the staff a research worker. The same was true of the great engineering schools. There were those two great governmental research institutions, the Reichsanstalt at Charlottenburg and the Prufungsanstalt at Lichterfelde. As if this were not sufficient there were founded by the Kaiser in 1912 in celebration of the centennial anniversary of the University of Berlin, certain highly specialized institutes, as they were called, with incomparable facilities for research, the manufacturers of Germany contributing to their endowment a sum equivalent to $6,000,000 as a thankoffering for what science had done for them. In other countries where there is governmental aid for research, it has not heretofore been on the same scale as in Germany, agriculture in the United States alone excepted. There is the National Physical Laboratory in England, and there is the Bureau of Standards in the United States, both supported by public funds. These institutions have done good service to their respective countries, both antecedent to and during the War. The scope of their work has been widened and the expenditures on both have been increased. As a result of the War the interest of the peoples in science has been quickened and governments have felt themselves called on to spend larger sums on research. Early in the War the Honorary Advisory Council for Scientific and Industrial Research was called into being by the British Government, a sum of £1,000,000 being placed at its disposition to aid industrial research. Other smaller sums have since been appropriated to cover current expenses. The British Government, too, is contributing much more largely to the support of the universities. In Japan the Government and the people have put 10,000,000 yen ($5,000,000) into an institute which is to conduct physical and chemical research. In the United States the National Research Council was created in anticipation of and just antecedent to the entrance of the United States into the War. Though not strictly speaking a governmental institution, it received financial aid from President Wilson during the War. The Carnegie Corporation has presented it with a sum of $5,000,000, and it is in receipt of $500,000 from the Rockefeller Foundation for Research Fellowships. A number of donors have contributed $150,000 for the purchase of a building site, and it has received a number of smaller gifts amounting in the aggregate to a considerable sum.

There are, of course, quite a number of research institutions on private foundations in different countries, which were established long before the War, and which have been doing good work since the beginning. In France there is the Pasteur Institute, with an endowment approximating 50,000,000 francs. In Belgium there are the various Solway research benefactions representing in the aggregate quite a large sum. In England we have the Royal Institution and the Cavendish Laboratory, which, with smaller endowments than those referred to, have conferred incalculable benefits on Great Britain and the Empire.

In the United States more than elsewhere large private donations have been made to research. In the early days astronomical research would appear to have been favored by the larger donors. The Johns Hopkins University may be regarded as an early research foundation, for research was the idea which was uppermost in the minds of those who had to do with the shaping of its initial policy. Research, too, stands first in the minds of those who direct the destinies of the University of Chicago, and Mr. Rockefeller's gifts to that institution, aggregating $35,000,000, have meant much for research in America. There is also the Rockefeller Institute for Medical Research with its endowment of $10,000,000, and the Rockefeller Foundation with a capital of $82,000,000, which has from time to time contributed considerable sums to furthering research in various directions. To this is to be added that portion of Mr. Rockefeller's recent $100,000,000 gift to Medicine, which will be devoted to research. The Carnegie Institution for Research, with its endowment approximating $25,000,000, also has forwarded research in many ways, notably through its maintenance of the Mount Wilson Observatory, through its geophysical, magnetic and other laboratories, as also through its magnetic charting of the oceans of the earth and the publishing of important scientific works which could not be brought out on a commercial basis. Furthermore the primary object of the Carnegie Corporation, with a capital of $135,000,000, is to aid research.

Certain of the larger industrial concerns in the United States spend very large sums on research. Already before the United States entered the War the annual expenditure of the General Electric Company on research in its laboratory at Schenectady had reached the sum of $500,000. During the War its expenditure on research was at a rate much in excess of this. As an instance of the high level on which some of these industrial laboratories are maintained, and of the liberal policy adopted by the directorate, one might note that in the Schenectady Laboratory are to be found physicists who, as scientists, rank with the first in America, and who in that laboratory find opportunity to cultivate science on the highest plane. It is worthy of remark also that the General Electric Company maintains in Cleveland a purely scientific laboratory for the study of phenomena connected with light, and that properly qualified scientists are freely invited to share with the regular members of the staff the facilities of that laboratory.

The Dupont Companies have spent as much as $2,000,000 on chemical research in the course of a year. They have introduced the bonus system and a research worker may receive as high as $50,000 for a successful piece of work. Some two years ago the chemists employed in various capacities in the works numbered 1,100. Of these 290 were research men. The number of the research workers employed in the laboratory of the Western Electric Company at the time referred to was upwards of 300, and the annual expenditure had passed the $2,500,000 mark.

The companies which spend such large sums on research seem to be well content with the results of their investment. They in general adopt a liberal policy towards their research workers. In many cases they encourage them to attend meetings of scientific bodies and pay their expenses in that connection. The universities might profit by their example. The industries, too, pay larger salaries than the universities to their scientists. In this regard the government departments which employ scientifically trained men are in the same category as the universities.

The industrial research laboratories in the United States have in a way become a menace to the universities and the government departments, which require research workers, through the inducements which they hold out to such workers. The lure of industrial research threatens ultimate disaster to the industries themselves, for if the universities lose their best teachers they will fail to provide the supply of efficiently trained research workers required by the industries. Where the universities and government departments in Canada lose their research workers to the industries, there is often the added aggravation that the industries which benefit are American and not Canadian.

The remedy for the existing state of affairs lies in increased salaries and more congenial surroundings for research workers both in university and governmental positions. With the introduction of such ameliorations no doubt a sufficient supply of scientifically trained men will be forthcoming to meet all the needs of the universities, government departments and industries, both in the United States and in Canada.

Industry, agriculture and other vocations which require the co-operation of research workers must look to the universities for the training of their scientists. The directors of the great industrial research laboratories everywhere emphasize the fact that the men they want are ones who have been trained in the fundamentals of science. For advance in pure science in our English-speaking democracies it would seem that we must look primarily to our universities, and to establishments on private foundations. Before science can be applied, its principles must be discovered. That it pays to make discoveries in science can be illustrated by numerous examples.

As a result of the discovery of the electro-magnet by Faraday in the laboratory of the Royal Institute of Great Britain there are in the world to-day material assets reliably estimated to be worth $20,000,000,000. The tungsten lamp was developed in the laboratory of the General Electric Company at Schenectady and has in a large part superseded the carbon arc and carbon filament lamps, thereby effecting a saving to the United States in light power which two years ago was estimated to be little short of $100,000,000 annually.

Experiments conducted in the National Physical Laboratory at Tedington have materially aided shipbuilding, and other research work and the same laboratory has forwarded enormously the art of aviation. University laboratories in Germany and England respectively were responsible for the scientific work which immediately preceded and made possible wireless telegraphy and wireless telephony.

One could cite indefinitely instances of the material benefits conferred by science on the race. Nor would we have to omit Canada in compiling our list. One of the Canadians who might be mentioned, a graduate of the University of Toronto, is a member of the staff of the Government Experimental Farm near Ottawa. His origination of the Marquis Wheat has added tens of millions of dollars to the wealth of his native country. Evidence of his country's gratitude is to be found in the last available report of the Auditor-General of Canada where his salary is listed as $2,800 a year.

There is room for much more to be done by science for agriculture in Canada. There is no reason why Canada should not, by the aid of scientific methods, double the value of her deep-sea fisheries as Norway has done already. By research she should be able to realize better on her forest products, to develop fuel resources, to utilize waste products, and to make available a larger supply of those minerals which present themselves in such quantity and variety in our northern country. All this and much more can be accomplished by the aid of properly directed research.

PRODUCTIVE AGENCIES IN CANADA.

1. Government Departments. The Departments of Agriculture, both federal and provincial have done good work.

Good work, too, has been done by the Geological Survey at Ottawa, by the Mines branch and by the Dominion Observatories at Ottawa and Victoria. The scientific men in the departments, however, work under handicap, and receive meagre salaries, so that the Government is often deprived of their services, and they are frequently lured by the offer of higher pay to the Republic to the south of us.

2. The Honorary Advisory Council still lacks a laboratory for research at Ottawa. It has, however, successfully carried out certain investigations, notably those connected with the briquetting of lignite and malnutrition in the black fox industry. It has also instituted a system of research bursaries, studentships and fellowships which have done so much to supply a need in connection with our universities.

3. The Biological Board has done excellent work, e.g., in the preservation and curing of fish. It could, however, do much more if adequate funds were at its disposition.

4. Industrial research in Canada on any considerable scale would seem to be confined to those commercial concerns which are more particularly interested in the production of rubber goods, pulp and paper, acetic acid and acetone and in the smelting of certain ores (copper, zinc and iron). American firms, having Canadian branches, do all their research work in the United States.

5. The Connaught Laboratories have done highly creditable work in the production of antitoxins.

6. In the universities the equipment is sufficient in some departments, in others quite inadequate. All the departments are undermanned. The man who is capable of doing research is usually swamped by elementary teaching. He lacks time for research on his own account. He cannot concentrate on the direction and training of men for research. There is no body of men specially set aside for research, men whose primary functions are to do research and to train students for research. Advanced courses in general and the direction of research in particular are treated too much as incidentals. They are usually contributed by men who are already doing full-time work in undergraduate instruction. In the universities then, as in the scientific branches of government departments, the research man works under a great handicap. What he achieves he achieves despite that handicap. The salaries in the universities are not adequate. On this account the leakage to the United States is very considerable. One of these departments is that of medicine. Both in Toronto and McGill there are organizations which would undertake the investigation of certain problems in medical and surgical research if they were only in the possession of adequate funds to pay competent research men. A typical instance is that of a research man in one of the departments under the Faculty of Medicine in the University of Toronto, who recently exchanged a salary of $1,500 for one of $8,000 south of the line. Outside of the universities and the Dominion observatories there are no laboratory organizations in Canada for purely scientific research. There is no foundation in Canada which corresponds to the Royal Institution of Great Britain, to the Carnegie Institution for Research, or to the Rockefeller Institution for Medical Research. For the application of science we have nothing like the National Physical Laboratory in England or the Bureau of Standards and the Mellon Institute in the United States.

There is a lack of Canadian organs for the publication of scientific results. We have the transactions of the Royal Society of Canada, and the transactions of the Royal Canadian Institute. We have, however, no great specialized journals such as are published in the various branches of science in other countries. Much of the research work done by Canadians is published in journals outside Canada. Our libraries do not provide adequate facilities for the research men in science. We have none of those societies in Canada which meet at frequent intervals for the reading and discussing of scientific papers. The Royal Society of London meets weekly for eight months of the year approximately. The Royal Society of Canada holds a three days' meeting once a year. There are also many highly specialized scientific societies in other countries to which we have nothing corresponding in Canada.

SOME DETRIMENTS TO REALIZING ON THE POTENTIAL BRAIN POWER OF THE YOUTH OF THE COUNTRY.

1. (*a*) There are practically no scholarships in the secondary schools. The remission of fees, while helpful, is not at all adequate.

(*b*) No special attention is paid to exceptionally gifted pupils.

2. (*a*) There is a lack of scholarships worthy of the name in the universities. What is called a scholarship in Canada usually consists of a single payment of a sum of $100 more or less. A scholarship in England will often mean the expenses of a young man for two or three years.

(*b*) In particular, subsidies for research students are few and meagre. The "Fellowships" for graduate students (usually about $500 a year) are not only too small, but are utilized for cheap teaching.

3. Under the conditions stated in what precedes comparatively few men complete a graduate course. Of those who do a considerable portion find their way to the United States.

REMEDIES.

To retain the research men we have in our universities it is necessary to increase salaries and reduce the burden of elementary teaching. To increase the number of our research men we must not only modify existing university positions in the sense just indicated, but must add to the number of these positions.

Manufacturers must in increasing numbers realize the aid which can be furnished them by research men and must establish research laboratories.

Positions for research men in government departments must be made more attractive both in point of salaries and in opportunity for research. There is room for much wider development of research activities under Government organization.

We need institutions on private foundations devoted exclusively to research. Men of wealth who would wish to do their country a service and who would be willing to dedicate a portion of their fortune to the good of their fellowmen should learn to realize that no greater returns can be obtained from any investment in the public interest than from an investment made on behalf of research—witness the Royal Institution of Great Britain, the Carnegie Institution for Research, and the Rockefeller Institute for Medical Research, already referred to.

Exceptional ability must be subsidized in the schools and in the universities. No man whom nature has designed to be a research man should have to fall out because he lacks the funds to complete his course. The potential creative thinker is the greatest asset the country has to realize on.

There is no other country peopled by a stock with the brain potentialities of Canadians which possesses undeveloped resources in any way comparable with those of Canada. All that is necessary to realize on these resources is to train a sufficient number of young men of selected ability in the methods of research, and to educate the Government and individuals of initiative in industry and elsewhere to an appreciation of what can be accomplished by science. With a proper policy on the part of the Government and the universities there is no future however rosy to which Canadians may not rightfully and reasonably aspire. The University of Toronto must lead in that movement for reform. Research men on the staff must be relieved of some of the burden of elementary teaching. The teaching staff must be increased. Where necessary strong research men must be added to the staff. All requisite facilities for research must be provided. There must be adequate organization of the research activities of the University. Research functions must be under the control of research men. Monies intended for research should be expended on the advice of research men. It would be desirable to have on the staff a corps of research professors whose primary functions would be to do research and to lead young men of selected ability into research paths.

One would raise the question as to whether it would not be well to have some standard for the professoriate, more particularly in cases where professors are assigned to take charge of graduate and research work? Would it be advisable to introduce from Europe those safeguards for the professoriate which are lacking in America? For example, the English system of electors suggests itself.

Other questions present themselves as to changes which might with advantage be made in the forms of administration or in the constitution of existent administrative bodies.

The Committee of the Council of the Royal Canadian Institute would urge on behalf of the Council that full relief be given to the pressing needs of the University of Toronto, and that generous provision for the future be made in her behalf, and more particularly in all that regards research that the organization be made effective and financial aid supplied in ample measure.

CONDITIONS SURROUNDING UNIVERSITY APPOINTMENTS IN AMERICA.

ADDENDUM TO MEMORANDUM ON RESEARCH CONDITIONS, ETC.

In connection with professorial appointments in America there exists a confusion which results in much detriment to the efficient performance of their higher functions by the universities. There is no ambiguity, it is true, as regards the placing of responsibility of appointments to the professoriate. It rests squarely on the shoulders of the President. Where the confusion exists is in the lack of an understanding in regard to the qualifications which should be possessed by a professor. There is in general no prescription of qualifications explicit or implied either through regulation or tradition. There is no minimum requirement. There is no standard. In the same institution may be found men of High School teaching grade occupying positions of like dignity with those filled by men of international reputation in their special branches. A professor may receive his appointment on the ground of his achievements in research. He may be appointed because of a reputation, better or worse founded, as a teacher.

There are institutions where, on occasion, executive and committee work take precedence of creative and scholarly attainments. In the case of promotions seniority is often the determining factor. A man may be popular with his colleagues; he may be *persona grata* with the president, neither of which facts is detrimental to his chances. Sometimes a man is a good advertiser for his university or college, and this is not unappreciated by those who direct the destinies of the institution.

The irregularities just referred to in connection with appointments are not equally in evidence in all universities on this side of the Atlantic. There are universities in which the atmosphere itself is a corrective. For example, in a number of universities, and notably in the University of Chicago, a research tradition is developing which cannot but have a wholesome influence on appointments. There are universities where a distinction is made between collegiate and university professorships. Where a Graduate Faculty exists the very fact of its existence would seem to imply the possession of special qualifications on the part of those who are members of that Faculty. Such qualifications, however, are not always sufficiently clearly defined.

With regard to professorial appointments in American universities, as at present constituted, there exists a threefold weakness:—

1. There is lack of a clearly defined professorial standard not only as between different universities, but within the individual university.
2. Local influences have too much to do with university appointments.
3. There is no body of men of technical knowledge on whom rests any responsibility for an appointment. It is assumed that the President consults men of technical knowledge. Whether his advisers are or are not scientifically competent, however, they have no public responsibility. They are behind the scene and their professional reputation runs no risk with their fellow scientists in the outside world.

In certain European countries appointments to the university professoriate are safeguarded by devices such as do not exist in America. In Germany before the War the professoriate was triply protected as regards research qualifications. In the first place the prospective candidate for the university teaching career had to make his Doctorate. This implied the writing of a thesis which contained a "Contribution to knowledge." The next step was to qualify as "Privatdocent." Practically the only requirement in this connection, apart from certain formalities, was the production of a piece of research work, which, however, had to be of a much higher order than that which would serve for a Ph.D. thesis.

Qualification as Privatdocent did not make a man a member of a university staff. That was explicitly understood. It simply gave him an opportunity to show the mettle that was in him. He could announce courses of lectures and make use of the university classrooms. He was in competition with the professors for their students. He received the fees of those whom he drew to him. He received no salary however. The professor received both fees and salary.

The Privatdocent was under no obligation to the university. The university was under no obligation to the Privatdocent. If he received a university appointment it was usually in some other university than that in which he had spent his time as Privatdocent. Also the only hope of such appointment lay in the publication of research work of sufficient distinction to attract attention to him. Otherwise he remained a Privatdocent to the end of his days.

The institution of Privatdocent greatly limited the material from which the professoriate could be recruited. It established a standard. It meant a minimum qualification. The actual appointment was made by the head of the State, in Prussia for example by the King of Prussia, from a list of names (usually three in number) placed before him by a committee of the Faculty.

There are occasional exceptions to the method of appointment to the professoriate in German universities sketched in what precedes. Such exceptions, however, are made only in the case of men who have specially distinguished themselves by the publication of some important piece of work of a research character.

In France a pre-requisite to the university career is the Doctorate. Formerly, in addition to being a "docteur" a candidate for a position on the teaching staff of the university had to be an agrégé, that is to say, he had to be a successful candidate in a competitive examination known as the "agrégation." This, however, has fallen into disuse except in the Faculties of Law and Medicine. In science then a young man who has professorial aspirations must in the first place be a Docteur des Sciences. There are two Doctorates in science, a university Doctorate, which will vary with the university, and a State Doctorate. It is the latter which is a pre-requisite to a position on a university staff. The conditions for this Doctorate are on the whole more exacting than those for the German Ph.D.

Before one can become a professor he must serve as "maitre de conferences." At the Sorbonne in Paris it is the tradition to appoint graduates of the Ecole Normale Superieure to positions on its staff. This, it may be said, is one of those schools for genius maintained by the French Government. It is of university grade, and admission to it is contingent on success in a competitive examination. On the scientific side it is permitted by regulation to accept only 22 new students annually. One hundred and fifty of the most brilliant boys in France, ranging from 18 to 21 years of age, write for entrance. Of these all but 22 must be plucked. The boys in this school live in residence. They enjoy special privileges in their studies, and are not retarded in their progress by the presence of boys of mediocre ability. At the end of three years in residence there is another sifting. The most gifted are headed for the professorial career. The others form a brilliant nucleus for the staffs of the Lycées.

It may be noted that half the students in the Ecole Normale Supérieure are maintained at the expense of the Government. They are under obligation to take service with the Government. The Government is under obligation to furnish them with a position.

When I was in Paris last year I was informed that there were two professors at the Sorbonne who were not graduates of the Ecole Normale. These two, however, were graduates of the Ecole Polytechnique, another school for genius, whose special function is the selection and preliminary training of those men who are to be France's military leaders. Foch, Joffre, Pétain, and others of the French Generals, whose names became familiar to us during the War, are graduates of this school.

It may be added that the actual appointment to a professorship is made by the Minister of Education from a list furnished to him by the Council of the University, and the Council of the Faculty in question. The list must contain at least two names. The French system, like the German, results in the appointment of a strong corps of research professors.

In England the method of making appointments to university chairs is by no means uniform. In certain universities, including Oxford, Cambridge, and London, when a vacancy occurs the general procedure is to name a body of "electors" whose duty it is to select a man to fill the vacant position. The electors are men of technical knowledge of whom a certain number must be outsiders.

The universities, in adopting the system of electors, have had a two-fold object in view. On the one hand they desire to eliminate local pull, and on the other hand to secure the appointment of strong men to positions. The writer was informed that the voice of the outsiders was almost invariably the deciding factor in making a selection. The system is said to work well and to result in the appointment of strong research men to the scientific chairs.

The details as to the precise mode of selecting the electors are not familiar to the writer. They will no doubt vary somewhat with the form of organization of the university in question. There are at least three different types of organization represented among the universities which have introduced the system. In any case one can be sure that cognate departments will have a voice in naming the electors who are to select a man to fill a chair in a given department.

It is to be noted that in the universities here explicitly referred to there are exceptions to the application of the principle of electors. In ancient establishments like Oxford and Cambridge there are chairs which could not be filled by a body of electors save in contravention of the terms of their foundation. The Medical Faculty of the University of London I understand is also to be excepted.

The principle involved in the system of electors might well be introduced into the University of Toronto in a form adapted to local requirements and consistent with whatever organization we may adopt. It is imperative that there should be some change in the organization which at present controls research in the University of Toronto. Is there to be a Graduate Faculty? Are we to have research professors? In any case there will be chairs of sufficient dignity to be filled with men of international reputation. Why should not the man who is to fill such a chair be chosen by a "Board of Electors," that is to say, by a group of men of technical knowledge who are responsible not only to local opinion, but who also assume a certain professional responsibility in the presence of international scientific public opinion. In the case of certain chairs, too, on occasion, it might be found advisable to include among the electors scientists from beyond our borders.

May I say a word on behalf of the appointment of research professors in our University? A research staff, known as such, would raise the status of the University of Toronto in the eyes of the other Canadian Universities. It would add prestige to the university at home and abroad. It would give the average citizen a new conception of the functions of the university. It would tend to create a public opinion which would be favourable to larger expenditure on higher education.

We have not yet arrived at a stage where it would be advisable to appoint a corps of research professors without any teaching obligations whatever. The burden of teaching, however, should be reduced to a minimum. The functions of a staff of research professors in the University of Toronto would be to do research work themselves and to direct a selected group of students into research paths. They should not be required to do any undergraduate teaching. If they wished, however, to give an undergraduate course in order to keep in touch with the source from which their graduate material would come later on, there ought to be nothing to prevent them doing so.

J. C. Fields,

Chairman of Committee of Council of Royal Canadian Institute.

MEMORANDUM IN REGARD TO RESEARCH STAFF.

Presented by Prof. J. C. Fields.

To further the objects of research within and through the University of Toronto, it is deemed advisable that there should be appointed in association with, but not subordinate to, the several departments of Natural Science men whose duties shall consist in the prosecution of research on their own account and in the training of young men of selected ability for research. The appointees shall consist of two classes:—

(*a*) Research Professors.

(*b*) Research Associate Professors.

The appointments made in both classes shall be of men who are actively engaged in research. The Research Professor shall be a man who has already distinguished himself in his special science, and who has an acknowledged international standing. The Research Associate Professor shall be a man who has proved himself to be possessed of research ability of a very high order, and who may reasonably be expected to develop into a man of the type appointed to class (*a*). Men of class (*b*) should be assured of promotion when they have done the work and acquired the distinction required of men of class (*a*).

The body of men included under (*a*) and (*b*) shall be known as the "Research Staff in the Natural Sciences" of the University of Toronto. Nothing in the foregoing shall be interpreted as meaning that a member of the Research staff may not undertake a limited amount of more elementary teaching if it is his desire to do so, and if arrangements therefor can be made by the department concerned. It has its advantages, too, for a Research Professor to keep in touch with the body of students from which his own research material is to be selected later on.

The salary of a Research Professor should be not less than $5,000, the salary of a Research Associate Professor not less than $3,000.

A third class, not of the "Research Staff," but associated with it, should be

(*c*) Part-time Research Assistants.

Men of decided research bent on the regular teaching staff should have opportunity to follow their inclination. The burden of teaching in their case should be reduced and they should be encouraged to share to a certain extent in the work of the research staff associated with their Department. This would be helpful and stimulating to the men themselves, and would aid in diffusing the research spirit throughout the institution. Occasion would arise from time to time to transfer to the research staff men of the type here referred to. In any case, however, it should be well understood that research achievement on the part of a member of the regular University staff would, in the ordinary course of events, just as surely bring advance in rank and salary as would work in any other field of University activity. Besides the Part-time Research Assistants referred to above there would also be a number of younger men who, after taking their Doctorate, would continue for one or more years to serve on salary as (*d*) Whole-time Research Assistants. Such men would as a rule eventually find their vocation as members of the regular teaching staff of this or some other University.

To the research workers just enumerated are to be added the students who will study under them and be guided by them into research paths. A number of student Fellowships should be available. The student Fellow would be expected to devote all his time to his studies. His duties should not include services to the University or members of the Research Staff other than those which are incidental to his training. The annual value of a student Fellowship should be $750.

The student Fellow and, in general, the man who is encouraged to become a Research Student, should be of such grade as to justify the expectation that after a certain amount of training he would be qualified to be appointed to a position on the teaching staff of a university, or that he would be able to make himself scientifically useful either in a university laboratory or in a laboratory for industrial research.

It should not be forgotten that the teaching professor plays a fundamental role in the development of research in the community. He is intimately associated with the student during his undergraduate course and has opportunity to note his particular abilities and inclinations. He has much to do with formulating his students' ideals. He can point the student of exceptional ability in the direction of research where that would be desirable. He can indicate such student to members of the research staff and enlist their interest in the prospective research men.

Special funds quite apart from the ordinary budget of the departments should be available for the expenses associated with research. These would include:

(1) Salaries of the Research Staff, of the Research Assistants, and of the Research Fellows.

(2) Salaries and wages of technical and other assistants.

Under this head would come laboratory technicians, preparators, mechanics, computors, laboratory attendants, stenographers.

(3) Material and equipment required exclusively for Research.

(4) Travelling expenses in connection with field and museum workers.

With reference to (3) it is obvious that large sums might be expended on equipment. It is, therefore, important that the equipment already possessed by the University should, wherever possible, be placed at the disposal of the Research staff. Where apparatus or material required by the Research staff is needed, also for undergraduate teaching purposes, some working arrangement would have to be made with regard to its use. This, however, should offer no great difficulty. For the purchase of expensive apparatus to be used exclusively for research it would probably be advisable to set aside a certain sum annually with a view to constituting an emergency fund from which appropriations could be made (on the recommendation of the Research staff) to pay for such purchases.

It should be pointed out that no money, in the first instance at least, would require to be expended in the erection of new buildings, although it might be necessary to make alterations in existing buildings in order to provide accommodation for the Research workers.

APPENDIX IX

STATEMENT OF WORKERS' EDUCATIONAL ASSOCIATION

PRESENTED BY A. J. GLAZEBROOK.

The demand for adult education by those workers, manual and clerical, whom circumstances have excluded from the Universities, is spontaneous and growing. This is the case both in Great Britain and in Canada, and what these men and women ask for is not training in vocational dexterity, but guidance in the pursuit of wisdom.

Like Solomon, the worker desires wisdom and understanding, but, unlike Solomon, he seldom receives the reward of riches and honor, and very rarely expects it. It is to the community that the prize is awarded.

The industrial revolution at the end of the eighteenth century was an unexampled triumph of human intelligence of the mechanical order. It added vastly to the numbers of the white races, and led to a radical rearrangement of the populations. Also it gave birth to a political philosophy of harsh individualism and unrestricted competition which, like a fierce fire, burned away the older bonds that had given at least a semblance of unity to human societies.

The combinations that again emerged out of this individualistic chaos tended to take the form of occupational groups, nurtured upon and living by mutual opposition, and to constitute a new and menacing group self-assertion. Amid this welter of competing egoisms there grew up in the nineteenth century a new tradition of education. From being conceived of as a quiet "drawing out of the powers of thought," an "interpretation of life," education sank to the office of equipping men, not for life, but for conflict.

Fifty years ago, or even thirty, the English world was full of phrases such as "knowledge is power." By knowledge they meant in the main technical knowledge, or knowledge of some business or trade. Unquestionably the speeding up of primary education and of training in occupational efficiency was very much to the good. For a time it ceased to be realized that life did not consist in the business of making a living, and that wisdom, especially political and social wisdom, grew, not from cleverness in business, but from earnestness and breadth of thought.

In spite, however, of the domination of the materialistic view of education, the nineteenth century, from 1825 onward, is full of experiment, usually on a very small scale, in a more spiritual form of education for the workers. Usually these efforts can be traced to some local enthusiasm of the workers or to the genius of some individual teacher. In the later 70's and in the 80's University Extension lectures were established, and it happened that in the earlier days of that movement there were available several men of unusually high qualifications, even of genius. The lectures of Arnold Toynbee, for example, while they were devoted very largely to economic subjects, were full of the spirit of thought. A sporadic series of lectures, however, proved to be ineffective, and gradually the idea of group study developed. In 1903 the Workers' Educational Association began its organization. It had difficulties in obtaining qualified tutors, and it was only in 1907 that the W.E.A. became associated with the Universities of Oxford and Cambridge, and its real development began. The principle upon which this organization has worked from 1907 to the present time is that of serious and continuous study undertaken by relatively small groups of men in association with a highly-qualified tutor. There are at the present time some 250 groups of from 12 to 25 members, who are working on the basis of a three years' course of study, and, in addition to that, there are several hundred one-year groups and a number of other less organized associations for the purpose of study. In the early days of the movement the demand on the part of students was largely for economic subjects, which seemed to have some direct bearing on their class position in society. That, however, is changing, and there is now a large proportion of students in literature, political science, history and various other subjects that have no direct relation to the business either of making a living or carrying on a class conflict. The majority of those students either I believe, middle-aged workers. Young people from sixteen to twenty or thereabouts are always full of restlessness, and in the case even of well-to-do people it is frequently a struggle to induce their young people to continue study during that time. The practical life of money-making has an attraction for them, and they are unable to see the advantages of learning. Working people are rarely able to continue study beyond quite an early age, and for some years after amusements occupy their leisure, and it is only later that the reaction to more serious thought has its turn.

The W.E.A. in Toronto was organized in the autumn of 1918. During the winter before that, one class, conducted by Professor Milner in the study of the "Politics" of Aristotle, and composed of about twenty-five students, had been carried on. This class was successful and enthusiastic, and it was these men who formed the nucleus of the body that took the name of the Workers' Educational Association of Toronto and District. In the season of 1918-19 there were about one hundred students; in the following year about the same number, with somewhat less enthusiasm; but this present season began with a large number (altogether, about 160), and the whole tone was enthusiastic and hopeful. The experience in the Toronto W.E.A. has been similar in many respects to the English organization in the choice of subjects. For the first two seasons economics was mainly asked for, and, of course, there are still a number of people who prefer that, but a comparatively wide demand has arisen for other subjects, and there are now several classes in history, English literature, and psychology. The English literature class includes about forty students. In addition to these classes one has been formed in Hamilton that appears to be successful, and there is likelihood of another. Both in London and Ottawa an effort is being made to form classes, and there are suggestions from other points as well. The classes are not composed exclusively of manual workers, but include a fair proportion of people of what one might describe as the clerical class.

Tutors for these classes are drawn almost entirely from the University staff, and from the first the movement has depended for its life on the support and the assistance of the University, which has been given generously, and, on the part of the tutors, at considerable sacrifice. It has become clear that the main difficulty in the way of wide expansion of the work is money, not that the present tutors are unwilling to continue working at the tiny honorarium that they now receive, but even on this very inadequate basis there is not enough money for much further expansion. Two things are noticeable in the English organization. One is that the main supply of necessary funds comes from public bodies, such as Local Government Boards and the Board of Education; the other is that the Universities who provide tutors are not themselves state institutions, and are limited in the amount of money that they can supply. They do supply the tutors and they have developed a body of men specially trained in the requirements of the W.E.A. The position here is different. Toronto University is itself a state institution, and is dependent for its funds on the Government, so that in the last analysis it must look to the Government for the means for carrying on this work, as it does for the means of carrying on the other departments of University education. The experience of three years has convinced me that there can be one, and only one, satisfactory centre for the distribution of these funds, and that is the University. It is the University, after all, that contains the treasury of knowledge and the training in method that are required. Unquestionably the tutor trained in University is, as a rule, far the best; the amateur is only second best, with a considerable interval.

In point of fact, the whole matter should be regarded as an extension of University work. It is quite feasible that some sides of the organization may be managed in each locality by a proportion of representatives of the workers themselves, but for the arranging of courses of study and the selection of tutors the knowledge and experience of the University is indispensable.

For this important and growing work it is clear that a definite sum of money is required to secure continuous efficiency and expansion. Probably from $10,000 to $12,000 would be adequate for the first year, which would include $2,000 or $3,000 expenditure which would not have to be repeated, but its place one would hope would be taken by the necessity arising for another all-time tutor.

Suggested Budget for W.E.A. for First Year.

One all-time tutor	$3,000
Travelling expenses and secretarial work	2,000
Library	2,000
Eight tutors in Toronto at $400	3,200
	$10,200

Accommodation may be found in the University Buildings for the library and reading-room.

Two thousand dollars does not seem excessive for a first instalment of books. Some newspapers and journals, as well as maps, should be provided.

The purpose and meaning of the education provided by this organization would be something quite different from training in technical knowledge or in any of those forms of dexterity that are associated with immediate personal success. This, which one might call the materialistic side of education, is unquestionably necessary, but when it is given alone its product is not peace, but strife. Individual education in efficiency of one sort and another is, after all, fitting a man, not for life, but for making a living, and making a living is inevitably associated with competition, if not with strife. Further than that, it does little or nothing to fit a man for wisdom in social and political affairs that belong to the well-being and happiness of the whole community.

A community composed of groups or classes mutually hostile, or at least suspicious, cannot be a true society. The root of social harmony lies in like-mindedness, and that, in the social sense, is not to be found in a common pursuit of competitive activities, but in the region of noble thought and purpose. Here great men of every age have lived, and their books and the record of their lives and conversation remain as willing guides for the newcomer.

Of this region it is the business of the University to be welcoming and hospitable host and interpreter. In this circle a true equality can live, and just insofar as it includes all classes it can develop in them all alike the thoughtful mind that will approach the social and political problems that face them from a point of view detached from egoism, individual group, or class.

It is for this that the worker is asking, and he can only receive it in a form that accords with the limits of time and place that necessary occupation prescribes. The W.E.A. is designed to bridge the gap between the Universities which gather their students around them for the sake of convenience and economy and the worker students, who are tied in distant localities and unable to follow learning except during the hours of somewhat scanty leisure.

It cannot be hoped that a majority of any class will seek learning, but it may be brought about that an important minority of all classes may reach a common standard of that detached thoughtfulness that is the basis of political wisdom and the adversary of prejudice and misunderstanding.

APPENDIX X

STATEMENT ON TAXATION, BY W. C. GOOD, PARIS

PARIS, December 25th, 1920.

ROYAL COMMISSION ON UNIVERSITY FINANCE.
Department of Education,
Parliament Buildings, Toronto.

DEAR SIRS,—In conformity with an arrangement verbally entered into on December 8th, I submit herewith some suggestions as to how to increase the public revenue available for educational purposes, and beg to apologize for the delay in sending this communication, which I promised to forward, if I remember rightly, in about a week's time. I trust, however, that the suggestions herein made will not arrive too late to receive your earnest consideration.

I begin by quoting the following sentence from a well-known writer on Economics:

"In every well-developed community large sums are needed for common purposes, and the sums thus needed increase with social growth, not merely in amount, but proportionately, since social progress tends steadily to devolve on the community as a whole functions which in a ruder stage are discharged by individuals."

The education of our young people is one of such functions; and, if the trend of public policy since the time of Ryerson has not been mistaken, we may, I think, infer that the community as a whole *ought* to assume the obligation of providing a public education for all, and, as a corollary, ought to provide equal opportunities for all so far as this may be possible. To make it more nearly practicable increased revenues are necessary, the expenditure of which will generally result in ample compensations. How are these to be got?

My answer is a simple one, which I have had in mind for years. I propose a provincial tax on land values somewhat similar to the special tax levied during the recent war. Municipal assessors now assess "buildings" and "land" separately; and for the purposes of this tax the municipally-assessed values of the land could be taken as the basis. Some objection to this proposal might be raised because various municipalities have various bases of assessment, some assessing at full value, some at half value, and others variously between, and thus some unfairness might result. This same objection, however, held with respect to the above mentioned special war tax, and will hold of all such property taxation so long as methods of assessment are not approximately identical. Perhaps it would not be impossible to secure greater equality in assessing, or, at all events, to equalize assessments for provincial purposes. But at any rate this objection is of minor importance, and is, in my judgment, quite overborne by the very great advantages which will result from the proposal put forward.

The obvious advantages are many. Some may be enumerated as follows:

1. A large and constantly increasing fund would be provided for a purpose which everyone admits is of vital importance to the whole nation.

2. The burden would fall largely upon those most able to pay.

3. Such a tax would help to remove both the temptation and the power to speculate in land and other natural resources and thus materially encourage productive industry. The earnings of labor and the returns on capital would be free from exactions.

4. Incidentally those who now have the best educational opportunities for their children—those living in or near large urban centres—would assist, according to their individual ability, in providing better facilities for those in the more remote districts, where the children are often the brightest and the best, and where, therefore, educational facilities will bring about the best results.

5. Such a tax would return to society, for the best possible purposes, part, at least, of that value which social development has produced, strike a blow at social parasitism, and exalt the worker to his proper position in society.

In making the above suggestions I do not contemplate, of course, that all the increased revenue should be devoted to university education. It is more necessary, in my judgment, to improve rural education and provide secondary education for the masses on the farms. But I am not blind to the great importance of supporting our Universities in a most generous way, and part of the increased revenue would be available for the extension and improvement of University education.

Doubtless many objections will be raised against any new tax for any purpose. This we may expect. The providing of equal educational facilities for all and the more generous support of educational work in general is an object which will, however, commend itself as perhaps nothing else will to the masses of our citizens, and any proposal for such an object would have to be very unfair before it would be finally turned down by the people. It might take time to establish it. A beginning must be made some time, however, and if our educational work is to be better provided for some new source of revenue will have to be secured. I know of nothing which will have as many advantages and as few disadvantages as a provincial tax on land values, and I therefore commend it to your sympathetic consideration.

Yours, etc.,

W. C. Good.

APPENDIX XI

STATEMENT OF UNITED FARMERS' REPRESENTATIVE

MR. CHAIRMAN:

I am instructed by the United Farmers of Ontario to make, with your permission, a few representations on their behalf in respect of the enquiries which you are making as to the finance of the Universities.

You are asked to consider demands for payment of deficits of the three Universities of two millions or more for provision of from five to ten millions at once for buildings and equipment, and you are, I understand, to tell the Ministry whence all this money is to come. For the first time in the history of the University the farmers take interest in the finances of University education. In the past, on the recurring occasions of University readjustment, the University was generally supposed, by the farmers at all events, to be subsisting on a sufficient endowment and the interest, if any, evoked in the country on such occasions was mainly that of partisans of the Church organizations which strove for University control or direction. The setting aside of an annual payment of 50% of the succession duties averaged over three years, the gradual assumption of the cost of professional education by the University Commission set up by the Act of 1906, the conversion of the endowment into buildings, and the actual deficits which have been met by higher fees and by executive grants, and the sale of state-guaranteed bonds, have raised among the farmers a natural financial anxiety. It is also realized that the principle of one state University has been abandoned, and that the state is now affording annually to Queen's and London a support greater than the whole cost of University College and the University of Toronto thirty years ago.

The interest aroused in a class which has hitherto been indifferent is not merely of finance. An examination of the records of attendance shows that the rural population, numbering about 900,000, sent last year to Toronto University, but 351 out of a total of 1,833 students entering for study. The records show also that the City of Toronto enjoys the educational benefits of the State University in a proportion far beyond its ratio of population. In the Faculty of Arts, 693 out of 1,797 students came from Toronto, and in all the faculties 1,828 out of 4,777. Wentworth, including the City of Hamilton, with a population of more than 130,000, sent only 77. That is to say, it is apparent that the situation of the State University excludes a large proportion of the people who are outside from its benefits, and the question arises as to what extent a wise public policy will seek to decentralize education and bring it to the doors of those who pay for it.

I am not instructed to claim that the University of Toronto should be the sole recipient of the bounty of the state, but rather I am to urge that the financial and economic necessities of the time require a re-discussion of the University question which may result in greater frugality and perhaps in an extensive decentralization, a decentralization, at all events, of the teaching of culture, that is—of languages, literature, mental and moral science, economics, mathematics and history, with a general survey of science. The cost of laboratories and equipment makes decentralization of the teaching of advanced science and of the science of the professions apparently impossible; but my clients are not without anxiety, seeing the demands which Kingston and London make. To a city, a University becomes an important means of the prosperity of its citizens, and it is therefore reasonably to be feared that having got upon the rates neither Kingston nor London will rest until it has duplicated the faculties, buildings, laboratories, libraries and equipment which enrich Toronto and make it happy. The prospect of these drafts on the public purse is certain to cause unwonted interest among the farmers who have no such commercial interest in University education, and who are now in full view of an enormous depreciation of the values of their products and property while they are staggering under the burdens of the war and of a long period of public extravagance.

Municipal taxation alone approaches, I am told, an annual charge in the townships of $1.00 an acre. It is not, I am sure, an exaggeration of the sentiments of my clients to say that great as are the claims of the higher life, its means, unfortunately, are dependent upon the lower life of industry. The farmers, it must be admitted, have not made a final judgment about these matters. A final judgment they can only make after long debate of the disclosed facts and with a due regard for all the interests of the community. They require a re-discussion, beginning now and ending after the necessary time, perhaps of years, in a solution satisfactory not merely to Toronto and the educational experts and the cloistered controversialist, but to the whole people. I am, therefore, instructed to say:

1. That the University of Toronto is not well situated, in the business section of a great city and enveloped by a foreign population, to serve as the University of the state. Wisdom would have long since disregarded the sentiment held for the old building and have moved the University to the suburbs or to a quiet country town, where University discipline of students might be exerted.

2. That Toronto enjoys disproportionately the benefits of this public foundation, and ought fairly to contribute materially to the extent of at least $500,000 a year for the commercial and educational advantages which its citizens receive.

3. That in the past undue support of professional education has been put upon the state, and that in the University of Toronto culture education has been overcome and overborne by professional training at the public expense and immensely for the benefit of the City of Toronto.

4. That in the re-discussion of University Education the position must be taken that the demands of Queen's and Kingston for the foundation of great scientific schools cannot be granted out of the public purse, and that professional science must be taught at one institution if it is to be supported by the public.

5. That with regard to literary studies it is obvious that these are not enjoyed generally by the rural population in view of the figures which have been cited, and it is proper to consider a means of taking literary studies more generally to the people by a modification of the high schools, or it may be by the establishment of local colleges in affiliation with the University not only at Kingston and London, but at other places, and among these places, in the great country north of Georgian Bay, where there is now a population of over 150,000.

6. That the management of the University of Toronto has not been representative of the people, but of the City of Toronto, and that the management of the science schools has similarly been expressive of the City of Toronto.

7. That there has been an obvious disregard to the real interest of the whole people in the devotion of the public moneys to local enterprise and to professional schools, such as medicine, dentistry and the like. A six-year course in medicine is decreed while large parts of the province, where there are old populations and where new settlers are going in to master the land, the people are unserved by doctors or such service as there is is beyond the means of those who need it.

8. That feeble and trivial efforts to take culture to the people by means of University extension must give way to better means.

The correction of the evils of a University establishment which was not always wise, and was evidently lately without foresight, is not to be made at once, but evil direction ought not to be further encouraged, and at this time a definite opinion ought to be asserted against the claims made for triplication of the science services. Rediscussion will best be set on foot by returning the University to political control and by laying its annual budget before the Legislature on the responsibility of a Minister. When that has been done, intelligent debate of the University question in the general interest will grow from year to year and the just solution will be found.

LIST OF NAMES OF PERSONS WHO ATTENDED BEFORE THE COMMISSION

The following persons attended one or more meetings of the Commission and presented their views on the questions under consideration:

University of Toronto.

Sir Edmund Walker, Chairman, Board of Governors.
Sir Robert Falconer, President.
Brig.-Gen. C. H. Mitchell, Dean, Applied Science.
Dr. A. Primrose, Dean, Faculty of Medicine.
Dr. C. H. Howe, Dean, Faculty of Forestry.
Dr. Grant, Professor of Medicine.
Dr. J. J. R. McLeod, Associate Dean of Medicine.
Dr. J. P. McMurrich, Professor of Anatomy.
Rev. Dr. R. P. Bowles, Chancellor, Victoria College.
Dr. T. C. S. Macklem, Provost, Trinity College.
Rev. Father A. Carr, Principal, St. Michael's College.
Prof. J. T. Fields, Professor of Mathematics.
Prof. W. J. Alexander, Professor of English.
Mr. Justice Masten, President, Alumni Association.
Prof. J. C. McLennan, Professor of Physics.
R. Y. Eaton, Esq.
Dr. J. Murray Clark.
Thos. Roden, Esq.
Miss Scott, Alumnæ Association.
Miss Evelyn McDonald, Alumnæ Association.
Mrs. Edith Henderson, Alumnæ Association.

Queen's University, Kingston.

Principal Bruce Taylor.
Dr. W. E. McNeill, Registrar.
Professor Austin, Professor of Medicine.
W. F. Nickle, K.C., Trustee.
Geo. F. Henderson, K.C., Trustee.
Francis King, Esq.
Miss Marty, Alumnæ Association.
Prof. O. D. Skelton, Professor of Economics.
Prof. A. C. Clark, Professor of Physics.
Prof. W. T. Connell, Professor of Bacteriology.

Western University, London.

Major A. T. Little, Chairman, Board of Governors.
Major T. J. Murphy, Member, Board of Governors.
W. J. Brown, Esq., Secretary, Board of Governors.
H. J. Chapman, Esq., Member, Board of Governors.
Dean W. S. Fox, Faculty of Arts.
Dr. K. P. Neville, Institute of Public Health.
Dr. H. W. Hill, Institute of Public Health.
Dr. P. S. McKibbon, Medical School.
Dr. C. C. Waller, Huron College.
Father Muckle, President, Assumption College.
F. Landon, Esq., Librarian.

Individuals and other Representatives.

W. C. Good, Esq., Paris.
A. J. Glazebrook, Esq., Workers' Educational Association.
J. J. Morrison, Esq., United Farmers' Co-operative Society.
Gordon Waldron, Esq., United Farmers' Co-operative Society.
Graham Campbell, Esq.

Prof. Milliken, Chicago University.
James Peters, Esq.
Donald Graham, Esq.
Charles MacFie, Esq.
J. W. Schuyler, Esq.
Prof. John Sharpe, Esq.
Herbert Mowat, Esq., M.P.
Mr. Maxwell,
Mr. Harrison,
Alderman Cunningham,
Mr. Farrell,
Mr. Ferguson,
Mr. Perry,
United Board of Trade, etc., Western Counties.
Dr. Herbert Bruce,
Dr. H. B. Anderson.
Dr. F. Marlowe,

INTERIM REPORTS

(First, Second and Third)

OF THE

COMMISSION

To investigate and report upon the accuracy or otherwise of all returns made pursuant to the Crown Timber Act, Section 14, by any holder of a Timber License, etc., etc., etc.

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

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To His Honour, Lionel Clarke, Esquire,
Lieutenant-Governor of the Province of Ontario.

We, the Commissioners appointed by Commission of date the ninth day of March, 1920, have the honour to make the following interim report in respect of certain operations of Walter H. Russell, of the City of Port Arthur, either individually or by and through companies of which he was the principal and almost the only stockholder, or the manager.

1. The business of Mr. Russell and his companies has been, since 1907, the exploitation of the pulpwood resources of the Province of Ontario, in the District of Thunder Bay.

2. The pulpwood which they there obtained has been for the most part exported to the United States.

3. In order to secure certain valuable areas of pulpwood, Mr. Russell conceived and carried into operation a scheme for taking advantage of what he supposed to be the legal effect of the Mining Acts of the Province.

He caused a number of persons closely connected with him, or in his employ, to take out mining licenses, nominally for themselves, but in reality for him and his companies (the fees being paid by him). As he himself says, the licenses were taken out and the locations selected and obtained solely for the purpose of stripping the properties of the pulpwood thereon; and it never was intended that even the slightest development should follow the alleged discoveries of mineral.

4. This was admitted by Mr. Russell to have been done *mala fide.*

6. Very large quantities of pulpwood were wrongfully obtained in this way. The books of the Russell Timber Company show that in 1913-1919 there were so procured at least 79,350 cords.

6. In addition to the above, Mr. Russell and his companies have trespassed for many years upon Government lands without shadow of right, and they have removed therefrom much pulpwood of great value, which they have dealt with as though it had been cut upon Mining Locations.

7. In our opinion, upon the admitted facts, proceedings should be taken to cancel the patents improperly obtained and also to recover the value of the pulpwood and for damages generally.

8. We transmit herewith the evidence respecting the above matters.

All of which is respectfully submitted.

William Renwick Riddell.
Francis Robert Latchford.

Toronto, July 28th, 1920.

TO HIS HONOUR, THE LIEUTENANT-GOVERNOR OF THE PROVINCE OF ONTAIRO, IN COUNCIL.

We, the Commissioners appointed by the Commission of the ninth day of March, 1920, have the honour to make the following, a second Interim Report, in respect of the Shevlin-Clarke Company, Limited, of Fort Frances, Ontario:

1. The Shevlin-Clarke Company, since its organization in 1903, has been in control of many Timber Limits in the Province, as set out in the accompanying list marked "A."

2. The amount to be paid to the Province for the timber cut by the Company is calculated upon the price fixed in the contract. Two other matters only are of importance in determining the sum to which the Province is entitled, namely:

(1) The extent of the Limit, and
(2) The quantity of timber cut as determined by cullers.

3. Timber in that section of the Province is found in scattered areas rather than in continuous tracts as in certain other sections; and therefore the Limits there have, as a rule, been surveyed and laid out so as to include only territory with valuable timber thereon, and not in the approximately quadrangular form usual in certain other parts of the Province. Consequently the lumberman is not there called upon to pay ground rent, etc., for water areas or for areas without valuable timber. It is, therefore, the more important, in order that the Province may receive payment for all the timber actually cut, that the culler should make correct returns.

4. Mr. James Arthur Mathieu has, since 1903, been, and still is, in the exercise of the authority of General Manager of the Company, and he has, since 1911, been Member for Rainy River in the Legislative Assembly of the Province.

5. Mr. Mathieu before us swore that he had the patronage for this dsitrict "so far as Government matters were concerned"; that the Crown Timber Agent was appointed on his recommendation, and that while he thought there were some cullers appointed whom he did not recommend, and that he did not select all the cullers for his Company Limits, he did recommend some of them. The Honourable George Howard Ferguson, the Minister of Lands, Forests and Mines after December 22nd, 1914, swore that no Member of the House ever had the patronage in his Department, "Mr. Mathieu or anybody else," but that Mr. Mathieu, if he recommended the Crown Timber Agent, would assume that the appointment was on his recommendation. He also swore that he did not believe that Mr. Mathieu ever made a recommendation of cullers to the Department, but might have made such recommendation to the Crown Timber Agent, that the Crown Timber Agent was asked by the Department for a list of cullers, and that "the lumbermen recommend men."

No record has been kept in the Department of the work of the cullers; neither Minister nor Deputy Minister knew any considerable proportion of them, and the Government had necessarily to depend upon the Crown Timber Agent for any assurance as to the honesty of the cullers.

4. It is unnecessary to compare or criticize the evidence of these two witnesses; it is apparent that the cullers of the Company's operations in many cases might well believe that their appointment depended upon Mr. Mathieu's good-will.

5. Some of the cullers appointed to measure the timber of the said Company were for a part of the year in the employ of the Company, and one was in the receipt of money from the Company all the year round. In an investigation by Mr. Samuel Price in 1909 this culler was proved to have received $200 from a company whose logs he had been culling, and the following year he was not employed by the Department as culler. Thereafter he was again continuously employed as such, and became culler on limits of the Shevlin-Clarke Company. For the past seven years he has been receiving $125 a month from the said Company, in addition to his pay from the Government. According to his own statement under oath, for this $125 a month he did nothing that he should not have done for the pay received from the Government; the amount received from the Company has been paid without any bargain, the amount being wholly for the Company to say, and the Company could pay him "what they liked, when they liked, and where they liked." Certain of the returns made by this culler show on their faces that it is impossible they can be right.

6. In order that the Government might be correctly informed of the amount of timber to be paid for, the law was very carefully considered and framed; it has been for many years set out fully in the public Statutes of the Province and in Regulations which have the same force and effect as a Statute.

7. The Statutes provide:

A. That the culler must "measure fairly and correctly, to the best of his skill, knowledge and ability, all saw-logs which he may be employed to measure, making only such deductions as are necessary to allow for rots or other defects."

B. That the culler shall "enter in a book of record for the purpose of return to the Department what he believes to be the proper contents of the logs, noting also the number of saw-logs rejected as worthless, commonly called culls."

Books of record are supplied by the Department for the purpose.

C. The Statutes further provide that, "At the end of the season every culler shall make a sworn return upon forms supplied by the Department or its agents, which shall show the number of pieces measured and accepted by him, and their respective lengths and diameters and also the number of pieces rejected as worthless."

D. Before the year 1906 there were officers of the Government whose duty it was to check the work of cullers by tests applied from time to time, but in that year (1906) the system was changed, and thereafter the Government has had no check by its own officers upon the honesty and capacity of cullers.

E. The Statutes further provide that every person who cuts saw-logs on Public Lands shall cause to be kept in each camp, etc., the records prescribed. Blank books for such records are supplied by the Government.

F. The Statutes further provide that at the end of the season each record shall "be verified by the oath of the person who made the entries therein and be delivered to an officer of the Department."

G. The foreman in charge of each lumbering operation is required to make an affidavit of the number of pieces of saw-logs, etc., produced, that he has caused a correct account to be kept, and that he has examined the books of the culler and believes them to be correct. Blank forms for both kinds of affidavits are supplied by the Government.

8. The checks above set out should have been sufficient to ensure a reasonably accurate return of the timber cut.

9. The returns made to the Government by cullers and by the Company's servants on behalf of the Company contain a great mass of perjury and forgery. In many cases affidavits were made in blank; in many cases alleged affidavits were not sworn to, and in many cases the signatures to the affidavits were deliberate forgeries. Some of these documents were prepared and completed in the Company's offices.

10. The above facts and other circumstances, including the evidence of a culler that he had been instructed to return only one-half of the timber sealed by him, satisying us that the returns were not reliable, we caused an actual stump-and-top scale to be made by competent rangers and cullers upon certain of the Company's Limits in order to determine as accurately as possible the timber actually cut.

11. On the investigation so directed it was found from actual examination on the ground that the returns on behalf of the Company were grossly in error, being only about 25% of the true amount.

12. This result corresponds with what is indicated by the books and records of the Company, which show a very much larger output than is warranted by the returns to the Government. In one of the years the cut of which was investigated, the overrun was 133%; that is, the Company sawed two and one-third times the quantity stated in the returns.

13. A part of this overrun is legitimate on account of the Doyle scale used by the cullers, but by far the greater part is in effect a fraud upon the Government and the Province.

14. From the books and records of the Company the following scale of logs actually sawn in their mills is made up:

Year.	Amount returned to Government and purchased logs.	Amount produced by mills.	Percentage of production.
1911	20,512,604	31,149,835	151
1912	31,742,116	54,013,412	170
1913	53,389,527	92,355,818	172
1914	5,525,746	80,557,363	1,457
1915	29,775,291	62,877,142	211
1916	40,665,488	95,013,034	233
1917	39,679,457	91,304,572	230
1918	41,909,616	82,548,725	197
1919	30,981,869	60,126,116	194
Total	294,181,714	649,946,017	Average 221

(NOTE.—The very extraordinary excess in 1914 is said to be due to a large quantity of logs carried over, but this works itself out in the result and in the average.)

Consequently the Company in those years had an output from their mills of 355,764,303 feet more than appears in the return to the Government and in their statement of logs purchased from other lumbermen; in other words, the output is about two and a quarter times the return to the Government and purchased logs.

It is not possible to calculate with minute exactness the proportion of cut to return, but as less than one-fifth of the logs sawn were purchased, the above shows with substantial accuracy the percentage of production to the amount of return, any error being in favour of the Company.

15. The Statutes provide that the Minister of Lands, Forests and Mines may grant licenses to cut timber on ungranted Public Land "subject to conditions, regulations and restrictions as may from time to time be prescribed by the Lieutenant-Governor in Council."

16. On March 7th, 1914, during (Sir) William Hearst's incumbency of the office of Minister of Lands, Forests and Mines, Regulations were prescribed by the Lieutenant-Governor in Council which thereby became binding in law upon the Minister.

17. One of the said Regulations required that the "Limits shall be offered for sale by public competition" at an upset price after public notice, and that they "shall be awarded to the highest bidder."

18. Mr. George Howard Ferguson, who succeeded to the office of Minister of Lands, Forests and Mines late in the same year, 1914, acted upon the assumption that as the head of the Department he had the right to deal with such matters "regardless of that regulation."

19. On August 30, 1919, without notice to the public and without competition, he caused a license to be issued to the Shevlin-Clarke Company for Berths 15 and 19 in the Quetico Forest Reserve, about 21 square miles in extent, which he swore was "a very fine stand of pine," and which undoubtedly was very valuable timber.

20. Mr. Ferguson alleges that this was for the purpose of an experiment; but there is no provision in the Statutes or Regulations allowing an exception to the clear provisions above set out.

The issue of this license was a violation of the law of the Province.

21. From the above facts proved before us, in great measure from the books and records of the Company and from their servants, we think that the Shevlin-Clarke Company has defrauded the Province of large sums of money.

22. In our opinion all such proceedings should be taken by the Attorney-General for the punishment of those who have committed forgery and perjury, as the evidence transmitted herewith may justify.

23. We also recommend that proceedings be taken to recover from the Shevlin-Clarke Company, Limited, of Fort Frances, the sums of money unlawfully withheld from the Province, and for the cancellation of the license for Berths 15 and 19 in the Quetico Forest Reserve.

All of which is respectfully submitted.

William Renwick Riddell.
Francis Robert Latchford.

Toronto, October 30th, 1920.

To His Honour, the Lieutenant-Governor of the Province of Ontario,
in Council.

We, the Commissioners appointed by the Commission of the ninth day of March, 1920, have the honour to make the following, a third Interim Report, in respect of George Ernest Farlinger, of Sioux Lookout, Ontario:

1. George Ernest Farlinger, of Sioux Lookout, Ontario, has for some years carried on a comparatively small business as a lumberman and mill owner, and has been in control of certain Timber Limits in the Province, as set out in the accompanying list marked "A."

2. The amount to be paid to the Province for the timber cut by him was calculated in the usual way upon returns made to the Department of Lands, Forests and Mines.

3. An examination of his books and records disclosed the fact that the amount of the overrun at his mill, situated at Sioux Lookout, was much in excess of the amount justified by the use by cullers of the Doyle Rule.

4. The Doyle Rule gives a larger advantage to the lumberman and a larger legitimate overrun at the mill on small than on large logs.

5. The logs cut by Mr. Farlinger were of a small run, nearly all being under 11 inches in diameter, and in consideration of that fact we think that in his case a legitimate overrun is 50%.

6. There is no evidence of perjury or forgery in the reports made by the cullers, etc., on behalf of Mr. Farlinger, and he was himself innocent of any knowledge of wrong-doing.

7. Mr. Farlinger expressed in his evidence before us a willingness to pay for the overrun considered by us to be unjustifiable and at the rates mentioned in his contracts.

8. The amount of output at his mill was	5,168,434 feet.
The amount returned and paid for was	2,185,802 "
The amount not paid for	2,982,632 "
Allowance for overrun under Doyle Rule, 50%	1,092,901 "
Balance to be paid for	1,889,731 feet.

9. At contract prices the sum to be paid for the 1,889,731 feet is $13,030.74.

10. Mr. Farlinger has given to us his cheque for the said amount, $13,030.74, which we transmit with this Report.

11. We recommend that this sum be accepted in payment for the timber cut by him not reported to the Department.

12. The evidence relating to this matter is forwarded herewith.

All of which is respectfully submitted.

William Renwick Riddell.
Francis Robert Latchford.

Toronto, November 6th, 1920.

REPORT

OF THE

COMMISSION

TO INQUIRE INTO AND REPORT UPON THE RATES OF WAGES PAID TO MEN EMPLOYED BY THE HYDRO-ELECTRIC POWER COMMISSION IN THE CONSTRUCTION OF THE QUEENSTON-CHIPPAWA DEVELOPMENT, AS COMPARED WITH THE RATES PAID FOR SIMILAR SERVICE BY OTHER EMPLOYERS: THE ABILITY OF THE QUEENSTON-CHIPPAWA PROJECT TO PAY INCREASED WAGES: AND THE LIVING CONDITIONS OF THE MEN SO EMPLOYED.

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1922

PRESENTED TO THE LEGISLATIVE ASSEMBLY

BY COMMAND

H. C. NIXON.
Provincial Secretary.

Report of the Commission

To His Honour the Lieutenant Governor of the Province of Ontario:

Your Honour:

We, the Commissioners appointed by Your Honour to inquire into and report in the following matters:—

1. The rates of wages paid to men employed by the Hydro-Electric Power Commission of Ontario in the construction of the Queenston-Chippawa Development, as compared with the rates paid for similar services by other employers.
2. The ability of the Queenston-Chippawa project to pay increased wages.
3. The living conditions of the men so employed.

Under and by virtue of a Commission issued under the provisions of The Public Inquiries Act and dated the 19th day of May, A.D. 1920, most respectfully report as follows:

That your Commission, following instructions, proceeded to Niagara and visited the Chippawa Canal Works and examined personally the housing conditions. In addition to this, several meetings were held—open to the public—and witnesses were heard on behalf of the workers and of the Hydro Commission. Your Commission endeavoured exhaustively to learn the attitude of both sides in the dispute; and while there was considerable difference of opinion as to the housing conditions, the length of hours and rate of pay, yet the men were of one mind in expressing their confidence in Sir Adam Beck and the Hydro Commission, and were unanimous in the opinion that the Hydro Commissioners, while anxious to complete the work as economically and expeditiously as possible, were also anxious to deal fairly with the workers on the canal. The workers all showed a disposition to be equally anxious to assist in the completion of the work and that this public ownership should be a success.

Your Commission report their finding on the three questions submitted to them, as follows:

1. The scale of wages paid on the Chippawa Canal compares favourably with the scale of wages paid elsewhere, but we find that skilled labour in factories is receiving a somewhat higher scale.
2. From the figures presented by the Hydro Commission, it would seem that the Commission would be unable to pay higher rates without a readjustment of the rates to the municipalities concerned.

3. We find the housing conditions fairly satisfactory, as compared with other construction works, and are satisfied that the suggestion that the workmen themselves appoint a committee to consider any defects in the housing and boarding system and to suggest any better method for conducting the same, would amicably adjust all difficulties.

Your Commission would respectfully recommend to your consideration the following:—

1. That some better arrangement of ventilation be provided in the machine shop and blacksmith shop, in order that the gasses which now accumulate would be carried off and thereby remove the possibility of danger to the health of the workers in these shops, and some particular attention should be given to the ventilators over the fires.

2. We would further recommend that improvements be carried out in the matter of ventilation in several of the sleeping huts and eating apartments, as suggested by Sergeant Neame, the Sanitary Inspector in charge.

3. We find that rumours of waste in the way of material on the canal was absolutely unfounded. That, if anything, there is less actual waste of material in this construction than is usual on works of such magnitude. That the reports as to an unnecessary number of automobiles and motor trucks are absolutely without foundation.

4. That an arrangement should be entered into at once, mutually agreed to, whereby the business agents representing the workers should make known to the management any complaints, and arrange with the management for a periodical visitation of the plant; but we believe that a considerable part of the friction would be removed if these visits could be made at a time and in a manner which would not necessitate keeping those employed from their work. In the event of not securing satisfactory consideration of their complaints, that the complaints be reduced to writing and a copy of the same filed with the Hydro-Electric Commission in Toronto.

5. In the opinion of this Commission, after careful consideration, the basic principle of an eight hour day, having been accepted by both parties when signing the agreements last year, and in consideration of the fact that this principle is generally accepted in industry throughout Ontario, should continue to be recognized. But that, in our judgment, in order to complete this public ownership enterprize in the shortest possible time, to meet the imperative demand for power, labour should be prepared to work the ten hours on the same basis as last year so far as hours are concerned, namely, at a rate of time and one-half for overtime.

We feel that this is necessary: (1) In view of the fact that it has been shown that the volume of production under the system last year was on the whole satisfactory; (2) That the industries of Ontario are very large employers of labour, and therefore, labour, as a whole, will reap a measure of benefit from the concession asked of their representatives on this construction work; (3) From the evidence produced we are satisfied that this work can only be accomplished speedily and economically on two shifts of ten hours each, as under existing conditions the eight-hour shifts seem impracticable; (4) That the Commission feels, in view of the great demand for Hydro power, that it would be lamentable if the work were not pushed to completion with all possible speed.

6. We feel it is our duty to say that the Chippawa Development is deserving of the very heartiest and most loyal support of the people of the Province.

All of which is most respectfully submitted.

Edgar Watson,
Chairman.
M. MacBride.
W. H. Casselman.
A. E. Ross.
J. C. Tolmie.

Dated at Toronto, this 4th day of June, A.D. 1920.

Mr. Casselman, one of the members of the Commission, dissents from Clause 5, and submits the following as his judgment: "That the operation of the Queenston-Chippawa development work be carried on under a straight ten hour day without overtime, at a scale of wages that will put the men on an equal footing with men engaged in similar construction work."

My reasons for dissenting are as follows:—

This development work has become an absolute and immediate necessity for the Province of Ontario. To maintain her industrial position Ontario must be able to compete with Quebec in the cost of production of power.

This work is of as much benefit to the labour men as to any other class of citizen, and to my mind there is no reason why labour should reap the benefits of increased pay for the last two hours of a ten-hour day and the rest of the citizens

An eight-hour day is not the most efficient or rapid way in which to complete a work of this kind. The idea of a basic eight-hour day with two hours' overtime state. We must have sympathy with the ideals of labour but we should not allow these sympathies to stand in the way of industry which is to benefit the whole.

Labour should receive fair value for its production, but at the same time the people should receive fair value for their money which is to pay for it all. The capital cost of this work must be taken into consideration, as a high capital cost would menace Ontario's industrial situation. Figures have been produced during the investigation to show that the ratio of cost as to production is much greater in an eight hour day than in a ten hour day.

(Sgd.) W. H. Casselman.

Observations by Mr. MacBride.

In my opinion there is no need for alarm over the increased cost of the Queenston-Chippawa Development. It cannot be expected that the original estimates (made some years ago) would be at all adequate to meet costs under the present abnormal conditions.

The increases, so far as labour is concerned, are but a small fraction of the total. In my opinion, any operation or undertaking under public auspices should at least pay wages and provide working conditions on an equal basis to the conditions prevailing throughout the Province.

To pay labour less and to work longer hours in order that power users might receive power at the present prevailing prices, does not appeal to me as a just division of the responsibility for the increased capital outlay on any permanent development.

The municipalities on the Niagara system have enjoyed the boon of extraordinarily cheap power for a number of years and saved to Ontario industries many millions of dollars over that which they would have had to pay to privately operated power enterprises. During the past five years every known commodity entering into the process of manufacture has increased tremendously. Therefore, I see no reason whatever why we should not be prepared to accept a slight increase on our power prices.

To cover the whole increased cost of the Chippawa-Queenston Development but a slight increase on the thousands of power users in Ontario would be required. It is logical therefore that those who have profited by the great boon of the Hydro-Electric Development should now be prepared to meet the present situation and give their fullest measure of support.

In regard to the basic principle of an eight-hour day, it seems to me this must be conceded and time and a half paid for overtime. This principle has been acknowledged in the Peace Pact, signed by the allied nations after the great war, and is one of the chief labour clauses. It has cost labour many millions of dollars, many heartrending strikes and struggles to establish this principle. It is already in operation on all State contracts and public works under Federal jurisdiction of the United States Government. The eight hour law is also recorded on the statutes of many States in the Union and evidently it has been proven possible of operation on the other side of the line. I see no reason, therefore, why the basic principle should not be accepted in Ontario, and it seems all the more reasonable in view of the fact that the principle was accepted and put into operation with satisfactory results by the Hydro Power Commission and the Labour Federation upon this work last year. All the evidence goes to show that the production was satisfactory. I think, however, that in order to complete the work labour should continue to work ten hours but that they should be paid at least a time and a half rate for the extra two hours. I am sure if this arrangement is entered into it will avoid any further conflict in this regard until the work is completed.

The evidence so far as I was able to interpret it all went to prove: (1) That the work was a masterpiece of engineering skill and that the material waste was practically nil when compared with other construction work of this nature, thus refuting the unfounded rumours which were being circulated either by irresponsibles or the enemies of public ownership; (2) That the production and maximum results thus far were entirely satisfactory, both from a standpoint of the number of yards excavated and the cost per yard, proving conclusively that the management was all that could be desired and that the workers had not fallen down but that they had given a full measure of effort; (3) That the rumours of extravagance in any regard were pure fabrications, and although the inquiry was conducted in the openest manner possible not one atom of evidence was submitted in support of any such allegation.

A particularly pleasing feature connected with the inquiry was the repeated assurance on the part of the workers examined to the effect that they had unbounded confidence in Sir Adam Beck and his disposition to treat fairly with them, provided the actual conditions could be brought to his notice. And I have hope that the evidence brought out in this inquiry will assist in creating a better understanding.

It would appear to me, therefore, that a round table conference should be held at once and I am quite optimistic that an amicable adjustment can and should be made in order that this development may be completed with the least possible delay. The need for power is imperative.

In conclusion, I desire to express my appreciation of the whole-hearted co-operation, the goodwill and earnest effort of my colleagues on this Government Commission, and to express the hope that results of a satisfactory nature will accrue to the workers, the Hydro-Electric Power Commission and the Province of Ontario as a whole.

M. MacBride.

INTERIM REPORT

RESPECTING

CORONERS

OF THE

Commission to Inquire into, Consider and Report upon
the Best Mode of Selecting, Appointing, and
Remunerating Sheriffs, etc., etc.

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INTERIM REPORT RESPECTING CORONERS

To His Honour Lionel Herbert Clarke,
Lieutenant-Governor of Ontario.

May it Please Your Honour.

Having been appointed by Royal Commission to inquire into and to consider and report upon (among other things) the best mode of selecting, appointing and remunerating Coroners, and generally to consider and report upon all matters pertaining to the placing of such office upon the most efficient and businesslike footing, we submit this interim report thereon.

The office of Coroner is an ancient one, and may be traced back, in England, to the period of the Norman conquest. The Coroner of those days was a most important functionary, and had a variety of duties. He appears to have heard appeals in cases of felony, to have taken confessions and adjurations of felons who had fled to a sanctuary, to have kept a record of outlawries, and to have conducted inquiries for and securing to the King treasure trove, wrecks, and the forfeited chattels of felons.

In Canada the office dates back to the earliest days of our history. On March 9th, 1780, Governor Haldimand issued an ordinance regulating and establishing Coroners' fees. Under this ordinance the Coroner was entitled "For summonsing the jury, taking depositions, making the inquest and returning it," to £1 5s., and the sub-coroner, "For every inquest taken and the return thereof made agreeable to law," was entitled to 15 shillings.

It would appear that unnecessary inquests were sometimes held, for in 1850 an Act was passed which set forth that the existing regulations were insufficient and provided that inquests should be held only where the Coroner had reason to believe that deceased met his death by violence or by unfair means or by negligence, or when the deceased person was in confinement or a lunatic in an asylum.

About half of the Coroners appointed in the year 1855 were medical practitioners. In 1859 the proportion of medical men appointed had increased to about three to one. Since Confederation about 95 per cent. of those appointed Coroners have been medical practitioners. It is only in the Judicial Districts of Northern Ontario that any laymen have been appointed of recent years.

The total number of Coroners in Ontario to-day is about 550. A considerable number of the Coroners are inactive, and seldom hold an inquest. In Toronto there is a Chief Coroner, to whom the cases arising are reported by the police. He allots the cases to the other Coroners (who are known as Associate Coroners) in regular rotation. The same course is followed in the City of Hamilton, in which city there is also a Chief Coroner.

At several points at which the Commission sat Coroners asked for increased fees, but generally they appeared to be satisfied with the fees now received. The Coroners are leading and influential citizens of the communities where they reside, and many of them regard the services which they are called upon to perform as of a public character, and the amount of the fees is a secondary consideration to them.

By Statute of Canada, passed in the third year of the reign of William IV, it was provided that if the Coroner's jury found a person guilty of murder or manslaughter, the finding should be equivalent to the finding of a Grand Jury, and no further proceeding preliminary to trial—not even indictment by a Grand Jury—was necessary. This continued to be the law down to the year 1892.

By the Criminal Code adopted in that year the Coroner's jury was deprived of power to indict anyone. The Coroner might direct that a person found guilty of murder or manslaughter by a Coroner's jury be taken into custody and brought before a magistrate, but, before such person could be committed for trial there had to be a preliminary hearing by the magistrate, and, before trial, indictment by a Grand Jury. Where an inquest, therefore, was held and a person found guilty, the preliminary proceedings had to be taken just the same as if no Coroner's inquest had been held. Yet, notwithstanding the fact that the Coroner's jury has been largely shorn of its powers, Coroner's inquests are held and Coroner's juries are summoned just as they were before 1892.

The number of jurymen that serve at an inquest is fixed by Statute at not less than seven nor more than twelve. Generally the number summoned is not less than eight, so that in the event of one being absent the inquest may not be delayed. Each member of the jury receives $1 and mileage for each sitting. When the number serving is seven or eight, and there is one adjournment, the cost of the jury is usually more than $20. When there is more than one adjournment the cost is proportionally increased. In 1919 the cost of jurymen at inquests in the County of Simcoe alone was $583. In Toronto, in that year, there were 162 inquests, with 356 sittings, and the average cost for jurymen was over $25 per inquest, and the total average cost per inquest, including Coroner's and other fees, was about $80.

The power to indict anyone for a crime having been taken away from a Coroner's jury and a verdict of guilty not even having the effect of a committal for trial, should the jury be continued? That is a question that has been frequently raised before us.

Mr. R. H. Greer, formerly Crown Attorney for the County of York, says: "With the introduction of the Criminal Code the necessity for the Coroner's jury sitting as such was gone. They do not initiate any more, but they recommend, and the inquiry must be started all over again in the preliminary examination and the Grand Jury. . . . I do not see any benefit in sitting two or three nights with a lot of jurymen."

Mr. J. W. Curry, M.P.P., formerly Crown Attorney for the City of Toronto, says: "I would not continue the Coroner's jury, and if anyone had to be tried I would commit him at once to a court of competent jurisdiction without the waste of time and expense of bringing him before a court that has no greater jurisdiction than the Coroner's Court. At the present time we have duplication."

Mr. S. F. Washington, Crown Attorney for the County of Wentworth, said to us at Hamilton: "After the Coroner is through with the case the evidence has got to be all gone over again at the preliminary inquiry. I would not have the Coroner's jury. I do not think it is of any use."

Mr. J. W. Seymour Corley, for many years Crown Attorney for the City of Toronto, says: "I would not have a Coroner's jury."

The question as to whether or not the Coroner's jury should be continued has already been dealt with to a limited extent by the Legislature. In 1911 a section was added to the Coroner's Act which provided that a Coroner, with the consent of the Crown Attorney, might hold an inquest without a jury in a provisional judicial district. This amendment has been taken advantage of in the district of Parry Sound. We are informed that it has worked admirably there.

When the Chief Coroner in Toronto allots a case to an associate Coroner, the associate Coroner, as a rule, gets no other case until his name is again reached on the list. This rule applies where the associate Coroner, upon investigation, decides that an inquest is unnecessary, and so reports, as well as in cases where he decides that an inquest is necessary, and holds one. As the fee allowed the Coroner where there is an investigation and no inquest, is $5, and where there is an investigation and an inquest is $20, there is an inducement to hold an inquest. Former Crown Attorney R. H. Greer, in referring to this situation, says: "The doctor, who is a Coroner, only gets $5 for sending in a return, instead of getting his fees for an inquest, and, as the doctors are quite human, they exercise their discretion and hold an inquest." Mr. Greer further states his opinion to be that in seventy-five per cent. of the cases in Toronto where inquests are held, inquiries only, would have sufficed.

The question as to whether or not a post-mortem examination should be made is also decided by the associate Coroner, to whom the case is referred. The post mortem is made, not by the Coroner himself, but by another practitioner whom he calls in. The fee allowed for the post mortem and attendance to give evidence thereon at the inquest is $20 and mileage. The practitioner who is called in to perform the post mortem is usually a Coroner, who, when he gets a case, reciprocates by engaging the Coroner who employed him. Out of 163 inquests held in Toronto last year, post mortems were ordered in 126.

The fee system tends to encourage multiplication of inquests and post mortems. But another cause that tends to make them so numerous is the large number of Coroners. One is surprised to learn that there are some 60 Coroners in the City of Toronto. At present each Coroner has so few inquests that he has not the incentive or opportunity to become proficient. Crown Attorney Eric Armour, in speaking of present conditions, says:

"I think it would be in the public interest if there was a less number of Coroners, so that they would be employed all the time and become more familiar with their duties. A man who only holds one or two inquests in the year is not very competent. . . . Only two or three should be employed to do the work."

At the last session of the Legislature a further change was made in the Coroners' Act. By this amendment any police magistrate in a provisional judicial district may conduct an inquest at the request of the Attorney General or of the Crown Attorney for the district. This amendment also has been taken advantage of in the district of Parry Sound. Crown Attorney Haight, of Parry Sound, in reply to our inquiry as to its operation there, said:

"I think it is a splendid improvement. . . . If all police magistrates had the power of a Coroner it would work out wonderfully. . . . I think a magistrate can take the evidence more satisfactorily than a doctor."

Others who have appeared before us, while not having had the opportunity which Mr. Haight has had of observing the system in operation, strongly advocate the holding of inquests by magistrates.

Mr. W. C. Livingston, Police Magistrate at Brantford, says: "I presume a magistrate could conduct an inquest just as well as a Coroner, and that would save the money paid to the Coroners."

At the sitting of the Commission at Barrie, Mr. W. A. Boys, M.P., said: "I have thought that Coroners' inquests could be better conducted by the police magistrate, he calling in the medical men as witnesses. The expense of Coroners' inquests is getting to be enormous."

Mr. R. H. Greer, former Crown Attorney for the County of York, says: "The question of Coroners' inquests is a big one, and is grossly abused. The present form of Coroners' inquests, I think, should be abolished, and I think magistrates, or men who are called Coroners, should be appointed with the jurisdiction of a Coroner. . . . Having one doctor and one magistrate would solve all the difficulties of the Coroners' inquests."

Mr. J. W. Curry, M.P.P., speaking on the subject, said: "I think their (the magistrates') duties ought to be added to, and they should conduct all Coroners' inquests. Doctors should be appointed to make the autopsy and to advise whether an inquest should be held. I think a properly qualified magistrate would be better able to conduct an inquest than a physician. . . . I would have the medical man make an autopsy and give evidence as to the cause of death and have the investigation conducted by a magistrate."

Mr. J. W. Seymour Corley, Crown Attorney for the City of Toronto, says: "I would suggest . . . that the magistrate should assume the Coroner's duties."

Crown Attorney H. D. Smith, of Kent County, says: "I would have the investigation conducted by a magistrate. . . . I have not yet met a Coroner who could see things that other people could not. In nine cases out of ten a medical man is called and is asked what was the cause of death, and he could tell that to a magistrate."

His Honour Judge Vance, at Barrie, said: "I am strongly of the opinion that a magistrate should conduct a Coroner's inquest."

Crown Attorney Bowlby, of Kitchener, says: "I think the physician is the best man to make an inquiry, and the inquest might be held by the police magistrate."

Dr. Rodford, Mayor of Galt, said to us: "I suppose the police magistrate would be as fully qualified, if not a little better, than the ordinary physician, because a Coroner would probably only have two or three cases during the year, and he would not have a wide experience in taking evidence. The preliminary investigation ought to be made by a doctor."

Dr. A. G. Arnell, Coroner, of Barrie, says: "There is no doubt that a magistrate could do the work of taking the evidence better than a doctor, because he would have more experience."

A physician possesses special qualifications for determining the cause of death, and, in our opinion, a physician (who might well be called an associate Coroner) should make the preliminary inquiry. A magistrate skilled in the examination of witnesses and in all that pertains to bringing out the facts is, in our opinion, the proper person to conduct an inquest. Whenever a case in which an inquest may be necessary is reported by the police, it should be referred to the associate Coroner for investigation. Upon completing the investigation the associate Coroner should make a report to the Crown Attorney. If in the opinion of the Crown Attorney there should be an inquest he should at once notify the magistrate whose duty it would then be to hold one. If this course were adopted the inquiry would be made by an official best qualified to make it, and the inquest would be held by an official best qualified to conduct it. If the recommendations of this commission for the appointment of district magistrates should be carried into effect, the inquest should be conducted by the magistrate for the district where the accident or misadventure resulting in the death occurred. If the inquest should not be conducted by the district magistrate it should be conducted by a magistrate selected by the Crown Attorney from the magistrates in the county or district. A salaried magistrate should conduct an inquest as part of his regular duties, and there would be no extra charge for his services. If at any time during the inquest it should appear that a certain person was guilty, that person could be brought before the magistrate and the proceedings turned into a preliminary inquiry, and the party accused committed for trial if the evidence should be sufficient to justify committal.

The number of associate Coroners for any county or judicial district should be based upon distance to be travelled, the population and the amount of work likely to be required. With fewer associate Coroners each one would have more experience and would be able to do his work more efficiently than now. As a general rule the associate Coroners should be paid by fees. If the proposed changes be made the present objections to payment by fees would be removed.

Toronto is surrounded by suburbs which in many senses form a part of the city, yet while the County Crown Attorney has jurisdiction in the matter of inquests in both city and county, the jurisdiction of the present Chief Coroner at Toronto ends with the city boundaries. Complications frequently arise through a body in respect of which an inquiry or inquest is to be held being removed from one jurisdiction to another. In our opinion the county should be the unit, and the jurisdiction of the Coroners and associate Coroners should be for the whole County of York, including the City of Toronto.

For the whole County of York there might well be six or eight associate Coroners, one of whom should be chief associate Coroner, and who could call upon the other associate Coroners whenever he might require their help. This should be a sufficient number for any emergency. The police should report to the chief associate Coroner any cases in respect of which it would appear that an inquest might be necessary, and he or an associate Coroner designated by him should investigate and report to the Crown Attorney. The chief associate Coroner and the associate Coroners should be paid salaries based upon the amount of work performed. There might also be a chief associate Coroner for the County of Wentworth, including the City of Hamilton, with such number of associate Coroners as might be necessary. In Toronto the work of conducting inquests might be divided among the magistrates.

Medical men advise us that the general practitioner does not as a rule possess the special knowledge and experience that is necessary for the performance of a proper autopsy. Autopsies should, as a rule, be performed by chief associate Coroners or associate Coroners, and the practitioners selected for these positions should be men well qualified to perform autopsies. No autopsy should be made without authority from the Crown Attorney.

If the inquest were conducted by a magistrate possessing first-rate qualifications and sitting in open court with that full publicity that now attends Coroners' inquests, would it be necessary to continue the Coroner's jury? The prevailing opinion expressed before us is that it would not. We are told that at an inquest conducted by a magistrate sitting alone the facts would be brought out more fully than they are to-day by a Coroner and jury. We are inclined to accept this view. At the same time we are impressed with the importance of avoiding all possible ground for public suspicion that anything is being concealed or covered up. It is not only important that there should be no ground for suspicion, but it is important that no public suspicion should exist, whether based on any ground or not.

The presence of a Coroner's jury at an inquest introduces an unofficial element into the inquiry, and sometimes results in a fuller examination of the witnesses. With great respect for the opinions expressed before us that the

Coroner's jury should be dispensed with, we feel that it would be unwise to abolish it at present. At the same time, we believe that there are many cases where to have a jury is to incur needless expense. The amendment made in 1911, already referred to, under which a Coroner may, with the consent of the Crown Attorney, dispense with a jury, appears to have worked satisfactorily so far as it has been acted upon, and we recommend that it be extended so as to apply to the whole province instead of to provisional judicial districts only. If this were done the public would then have an opportunity of seeing how this change would work in a wider field. If it should work satisfactorily the Legislature could then enact that there should be no Coroners' juries except in cases where the Attorney General, or the Crown Attorney having jurisdiction, should direct that one be summoned.

Section 11 of the Coroners' Act provides that where the death of any person appears to have been caused in the construction or operation of any railway, street railway or electric railway, there shall be an inquest. Our attention has been called to the number of cases where it has been quite clear that death was due to natural causes, but where, owing to the provision in the Statute hereinbefore mentioned an inquest has been held. It has been urged by some that no distinction should be made between accidents happening on railroads and accidents happening elsewhere. While we have no doubt that owing to provision in the Statute mentioned inquests are held in many instances where death is due to natural causes, we believe that the existence of this law has, on the whole, a salutary effect, which more than counterbalances the cost of inquests in those cases, and we do not see our way to recommend the repeal of the Statute mentioned.

Another subject which has been brought before the Commission is the matter of the payment of witnesses attending inquests. At the present time there is no provision for payment, although where witnesses are brought for long distances payment is sometimes procured through the Crown Attorney. A case was brought to our attention where a party subpœnaed to attend an inquest had to drive a considerable distance to a railway station, there he had to put up his team at an hotel and take the train to the place where the inquest was held; he had to pay the expense of his team, his travelling expenses and railway fare out of his own pocket, and received nothing. Another instance brought to our attention was where a number of United States citizens who had seen an accident were detained for days at their own expense to give evidence at the inquest. Workingmen often lose a day's work in order to testify at an inquest and do not receive a copper.

Inquests are usually held in the evening, and the witnesses as a rule reside near the place of hearing. Often some of the witnesses are children. The standard of payment should be the amount payable to jurymen at the assizes, but to allow witness fees for the whole day and to pay children at the same rate as men in most cases would be over-payment. The fairest way would probably be for the Crown Attorney and the official holding the inquest to certify jointly what amount should be paid to each witness, and to pay that amount. If we do not pay witnesses, those who are near by when accidents happen will frequently be found to be blind and deaf to what was going on around them.

Cases have been brought to our attention where an accident which has caused the death of the party upon whose body the inquest is held has taken place in one county and the party has been removed to a hospital in another county and has died there. Other cases have been brought to our attention where a body has been removed from the county where the death took place to another county. In the first class of cases the inquest has been held in the county where the death occurred; in the other case the inquest has been held in the county to which the body has been removed. In each instance witnesses have had to travel long distances at considerable expense and inconvenience, and the cost of the inquest has been charged against the county from which the injured person or the body has been removed. The public interest would, we believe, be promoted if the inquest were held in the county where the accident or other misadventure happened, and in cases where the body is removed after death, in the county where the death occurred.

If a Coroner's jury be continued its character must be improved. At the present time little or no care is taken in its selection. Mr. Smith, Crown Attorney for Kent, said to us, "The jurymen are picked up on the street, and in nine cases out of ten they are not qualified." In cities we often have the professional juryman who has a friend on the police force, and year after year the same familiar faces are seen in the jury box. The jurymen should be chosen from among the residents of the district where the accident or death has occurred, and should be citizens of character and intelligence and good standing in the community.

It frequently happens that a person suspected of having committed a crime which is the subject of investigation is refused the opportunity to appear before a Coroner and examine witnesses. If he is heard at all, he is told that he is heard only as a matter of courtesy. In our opinion, anyone under suspicion or otherwise directly interested in the proceedings should have the right to be heard at the inquest and be given reasonable opportunity to question the witnesses. If inquests were conducted by magistrates fuller opportunity might be given than if conducted as at present by physicians.

Our recommendations may be summarized as follows:

1. That, except in the Counties of York and Wentworth, the preliminary investigation in cases where it appears that it may be advisable to hold an inquest shall be conducted by an official to be known as an associate Coroner, who should be a medical practitioner.

2. That the associate Coroner shall report the result of his inquiry to the Crown Attorney, who, if he is of opinion that an inquest should be held, shall notify the district magistrate, or if there is not a district magistrate, then a police magistrate having jurisdiction in the county or district, whose duty it shall then be to proceed forthwith to hold an inquest.

3. That in the County of York (including the City of Toronto) and in the County of Wentworth (including the City of Hamilton) there shall be a chief associate Coroner with, say six or eight associate Coroners in the County of York and four or less in the County of Wentworth, and that in each county the inquiry shall be conducted by the chief associate Coroner or by any associate Coroner designated by him, and that the chief associate Coroner or associate Coroner, as the case may be, shall report the result of his inquiry to the Crown Attorney, who, if of opinion that an inquest should be held, shall notify a district or police magistrate having jurisdiction in the county or district in which the accident or misadventure happened, and that magistrate shall then hold an inquest.

4. That an autopsy shall, as a general rule, be performed by the chief associate Coroner or an associate Coroner, but that there shall be no autopsy unless it is first authorized by the Crown Attorney.

5. That the provision of the existing Statute authorizing the Coroner, with the consent of the Crown Attorney, to dispense with a jury, shall be extended and made to apply to the whole province.

6. That all witnesses at Coroners' inquests shall be paid witness fees and mileage, and that the amount that each witness should receive shall be certified to by the magistrate conducting the inquest and by the Crown Attorney.

7. That every inquest shall be held in the county or district where the accident or misadventure happened.

8. That greater care be taken in the selection of jurymen, who should be citizens of character, intelligence and good standing.

9. That where an inquest is conducted by a magistrate anyone under suspicion or otherwise directly interested in the proceedings at an inquest shall have the right to be heard and to question witnesses.

W. D. GREGORY,
Chairman.

HORACE L. BRITTAIN.
NORMAN SOMMERVILLE.
ALBERT HELLYER.
E. A. POCOCK.

REPORT

OF THE

Committee

ON

Proportional Representation

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To the Honourable E. C. Drury,

Premier of Ontario.

Sir,

I have the honour to submit my report on the operation of Proportional Representation as applied in the electoral district of Winnipeg in connection with the Manitoba Provincial Elections.

By section 16 of an Act to amend the Manitoba Elections Act, 1920 (10 Geo. V, chap. 33), it was enacted that the electoral division of Winnipeg should be represented in the new Legislature by ten members, to be elected according to the principles of Proportional Representation. These principles, briefly outlined herein, with rules and regulations, now form sections 178A to 178H of The Manitoba Election Act, a copy of which Act is forwarded herewith.

Formerly Winnipeg was divided into three electoral divisions, each division being represented by two members elected under a system similar to that which is at present in vogue in the electoral divisions of Toronto. All of this was changed by the recent amendment to the Manitoba Act, and Winnipeg was made a single constituency, with a representation of ten members elected under the Single Transferable Vote System.

As you are no doubt aware, the Single Transferable Vote System of Proportional Representation was designed to give every party or organization a representation in an elective body equal to the voting strength of that party or organization. Under this system a party is bound to elect its proportionate number of representatives, provided the voters belonging to that party properly mark their ballots.

The system works out in this manner:

The voter chooses the candidate whom he wishes to have represent him. He signifies his choice by placing the figure 1 in a space provided on the ballot opposite that candidate's name. This is called the voter's "first preference," or "first choice." It may happen that this candidate may not need this vote, and so the voter may make a second choice by placing the figure 2 opposite the name of the candidate he fancies second to his favourite. In like manner the voter may mark as many preferences as there are candidates, and it is always advisable to mark a preference for every candidate representing his party.

The idea in marking more than one preference is this: If all ballots are properly marked and advantage taken of all preferences, it will require a certain number of votes to elect a candidate. This number is called "the quota," and is determined by dividing the total number of first preferences by a number greater by one than the number of candidates to be elected and adding one to the result. To be elected a candidate therefore requires to receive only this quota. All votes over this quota are called surplus votes, and are transferred to those candidates opposite whose name the figure 2 has been placed. In like manner a candidate having the least number of votes after all surplus votes have been transferred is eliminated from the contest and his ballots are distributed amongst the continuing candidates, according to the preferences marked on the ballot. If in either of these cases the voter has failed to make a second choice, his vote is lost and it becomes an "exhausted preference" or a "non-transferable vote." Therefore a voter should mark as many preferences as there are candidates representing his party, or his vote may ultimately become lost and his party possibly lose its proper number of representatives.

In discussing the Winnipeg election I consider it advisable to divide the election into its various stages.

A. Preparation.

For the ten seats allotted to Winnipeg forty-one candidates allowed their names to go before the electorate, each party—Labour, Conservative and Liberal—placing ten names on its ticket, the remaining eleven persons running independently. This resulted in an unusually large ballot, about eighteen inches long, and one which had a tendency to be more or less confusing to the voter and cumbersome to the officers whose duty it was to sort and count it. However, the exceptionally small number of rejected ballots, less than two per cent. of the total number of votes cast, and the correct balancing of sheets after each count, showed that not only did the voter understand his duty, but the officers had no difficulty in making correct returns.

The first step taken to simplify the ballot was to print the names of candidates in various colours. The standard-bearers of the Conservative party had their names printed in blue, those of the Liberal party in red, of the Labour party in green, and the names of the Independent candidates in black. In my opinion this procedure is very much open to question. It increases the cost of printing; the names of one party were omitted on some ballots; on other ballots the printer had the names of one party partially in the spaces in which the names of another party were printed; and also it is open to question if a party slate should be placed so prominently before a voter in a polling booth.

The most important step was instructing the voters how to mark their ballots. This was done by means of public meetings, addressed by Mr. Ronald Hooper, honorary secretary of the Proportional Representation Society of Canada; by instructive articles in the daily press by the same gentleman; by the distribution of literature by the Government, some of which literature is forwarded herewith; and by the distribution of literature by the various candidates and political parties.

B. The Election.

(Unfortunately about forty of the deputy returning officers failed to put in an appearance, and new appointments had to be made to fill their places at the last minute. It must be understood, however, that this was not due to Proportional Representation.)

At the close of the poll it was the duty of the deputy returning officer to sort out all of the ballots and place in separate parcels, labelled with the candidate's name, all ballots marked in favour of that candidate, and attach thereto a card showing the number of the polling sub-division, the name of the candidate and the number of votes received by him. The deputy returning officers had been well instructed in this, but when some of them failed to put in an appearance it was impossible to fill their places with any but uninstructed men, with the result that many ballots were neither counted nor sorted. All of this extra work fell upon the staff whose duty it was to check over the deputy returning officer's count, and considerably delayed their work.

C. Organization for Counting the Ballots.

The organization for the counting of ballots consisted of the following persons:

(*a*) Chief supervisor.
(*b*) Two supervisors.
(*c*) Four chief sorters.
(*d*) Thirty-two sorters.
(*e*) Eight transfer clerks.
(*f*) Two calculators.

After the transfer of Mr. Ivens' surplus the number of transfer clerks and sorters was reduced by one-half.

Although the persons making up this organization were known as part of the returning officer's staff, nevertheless they acted practically independently of him, and he was consulted with regard to questionable ballots only. He was, however, responsible for their acts and for the ballots while in their possession. He announced the results at the end of each count.

The chief supervisor sat directly behind the returning officer and beside the two assistant supervisors. The two calculators sat behind the supervisors. The four chief sorters had tables in front of their sorters, who occupied two long rows of tables. The transfer clerks had two long rows of tables in the rear of the sorters, each table having forty-one spaces, each space bearing the name of a candidate. One end of the room was partitioned off for the accommodation of the candidates and their agents.

D. Counting the Ballots.

The deputy returning officer handed his ballot box to the returning officer, who checked it off and opened it. The returning officer then gave the rejected and valid ballots to a chief sorter, making a note in his book of the number of ballot box and the number of the chief sorter. The chief sorter then divided the ballots amongst four of his sorters. He had eight sorters, working two to a table One of these sorters received the ballots from the chief sorter, checked them over, initialled the card the deputy returning officer had attached to them, and handed the parcel to his fellow sorter. This sorter again checked the ballots and handed them to the chief sorter. The chief sorter then handed the parcels to the two supervisors, who tabulated the number of votes received by each candidate. The ballots were then given to the transfer clerks, who placed each bundle in a space on one of the rows of tables labelled with the name of the candidate for whom the ballots are marked.

The chief supervisor was in charge of the organization. All questions arising out of the counting of ballots were submitted to him direct by the assistant supervisors or chief sorters. He had no authority to reverse the decision of a deputy returning officer, but if he considered such a thing necessary he submitted it to the returning officer, whose decision was final.

The calculators totalled the vote after each count, and also calculated the number of votes to be transferred from the candidate whose surplus was being distributed to a candidate receiving a portion of that surplus.

When the first preferences had been totalled by the calculators and the supervisors' returns completed, the chief supervisor was in a position to determine the quota necessary to elect a candidate.

In the Winnipeg election the total number of first preferences counted was 47,427. The number of members to be elected was ten. The quota or necessary number of first preferences for each candidate to receive to make his election certain would, therefore, be $\frac{47427}{11}$ plus 1=4,312.

When all of the votes had been tabulated it was found that Mr. F. J. Dixon had received 11,586 first preferences and Mr. T. H. Johnson had received 4,386. Each of these gentlemen was, therefore, declared elected on the first count by the returning officer.

The next step was to distribute the surplus vote—that is, the number of first preferences in excess of 4,312. Inasmuch as Mr. Dixon received a larger surplus than Mr. Johnson, his surplus was the first to be distributed.

The sorters then sorted Mr. Dixon's ballots, according to second choices, except when that second choice happened to be marked for Mr. Johnson, in which case the candidate for whom the voter had marked a third choice was credited with the ballot. To facilitate this sorting four large racks had been provided, each containing forty-one compartments, labelled with the names of the various candidates. The ballot papers were placed in these spaces according to the preferences marked on them. Since none of these ballots were to be credited to Mr. Dixon or Mr. Johnson, their names were printed on blue paper, and as a candidate was elected or eliminated his card was changed from white to blue.

After the ballots had been sorted they were checked over by the sorters, and each candidate's parcel of ballots was labelled with a card showing the number of votes or second choices in that parcel. These were tabulated by the supervisors and the ballots given to the transfer clerks, who placed them on their second table in the spaces labelled with the candidates' names. Each of these parcels are known as sub-parcels. The calculators were then given the number of second choices marked for each candidate on Mr. Dixon's ballots, and they calculated the number of votes to be transferred to each candidate. That was done in this way. Mr. Dixon received 11,586 votes, of which he must retain 4,312 and may transfer 7,274. He may, therefore, transfer $\frac{7274}{11586}$ of his total number of votes. For instance, Mr. Ivens received 5,758 second choices, and of this number he received 5,758 x $\frac{7274}{11586}$, or 3,616 votes. The remaining 2,142 ballots were retained to preserve Mr. Dixon's quota of 4,312. The calculators would, therefore, announce that Mr. Ivens would receive 3,616 of Mr. Dixon's ballots and Mr. Dixon would retin 2,142. The transfer clerks then took these ballots from Mr. Dixon, and after marking the figure 2 in a corner of the ballot to show in case of a recount that they had been transferred on the second count, placed them with Mr. Ivens' original votes on the first table. This was carried on until the last candidate had received his share. The 4,312 remaining ballots were then placed in a parcel, handed to the returning officer, and placed by him in a locked ballot box. The particular ballots to be transferred from each sub-parcel are designated by clause (*d*) of regulation 8 of section 178F of The Manitoba Election Act as those last filed in the sub-parcel. This opens up an element of chance, since the papers last filed may come from a certain section of the electoral division which is voting in strength for a candidate residing therein, whereas the ballots retained for Mr. Dixon may be marked in a totally different manner. This, however, is reduced to a minimum owing to the amount of sorting that has taken place, and these ballots have been fairly well shuffled.

Upon the completion of this count it was found that Mr. Ivens had secured 5,514 votes, and the returning officer declared him elected on the second count.

There were now two elected members with more than the necessary quota. Mr. Johnson had 4,386 votes and Mr. Ivens 5,544. Inasmuch as Mr. Johnson's surplus had been acquired in a count prior to that of Mr. Ivens, it was the next to be distributed. The same procedure was gone through with Mr. Johnson's surplus as that used with Mr. Dixon's surplus.

When this was completed Mr. Ivens' surplus of 1,232 votes was distributed. Since this surplus was derived from Mr. Dixon's surplus votes, only the votes transferred from Mr. Dixon were considered. As Mr. Ivens had received 3,616 second preferences, the ratio of distribution was $\frac{1282}{3616}$.

No candidate received sufficient votes to gain election on this distribution. It therefore became necessary to eliminate the candidate having the lowest number of votes. In this election it happened that the votes of the two lowest candidates were together equal to the third lowest. It was, therefore, possible to eliminate the two lowest, inasmuch as no matter if one received all the votes of the other, which would have been most extraordinary, he would still be low man. This process of elimination is carried on until a candidate has a surplus greater than the difference between the two lowest candidates. If there are but eleven candidates in the field, and the difference between his vote and the vote of the tenth candidate is greater than the total of all surpluses, there is no advantage in transferring these surpluses, and the eleventh man is declared eliminated and the remainder elected.

In this election Mr. Haig received a surplus of 104 on the thirty-first count. The difference between the two lowest candidates was much greater than this, so the lowest candidate was eliminated. This state of affairs continued until the end of the thirty-third count. At this stage there were three elected candidates whose surpluses had been transferred, four elected candidates who had undistributed surpluses amounting to 581 votes, one candidate barely under the quota and three candidates within 300 votes of each other. It was, therefore, necessary to distribute these surplus votes in the order in which they were obtained, to eliminate one of these three lowest candidates. This was done on the thirty-seventh count, when the final surplus had been distributed.

Observations.

The chief claim put forward by the advocates of Proportional Representation is that any public organization or party will receive representation in an elective body in proportion to its voting strength. A perusal of the voting at Winnipeg seems to substantiate this claim. The following summary of the first and final counts is of interest:

	First Count.		Final Count.	
Candidates.	Total Vote.	Percentage.	Total Vote.	Percentage.
Independents	6,362	13.4	nil	nil
Labour	20,167	42.5	20,739	45.5
Liberal	14,423	30.4	16,946	37.2
Conservatives	6,475	13.7	7,895	17.3
	47,427	100.0	45,580	100.0
Exhausted preferences	nil	...	1,847	...
Total	47,427	...	47,427	...

(NOTE.—In the final count the percentages are based on the total effective vote. If the exhausted preferences were included the following would then be the percentages, Labour, 43.6; Liberals, 35.7; Conservatives, 16.7; Exhausted Preferences, 4.0.)

In the final results Liberals and Labour each secured four members and the Conservatives secured the remaining two. Therefore, for polling 45.5 per cent. of the total effective votes, the Labour party secured 40 per cent. of the representation: for polling 37.2 per cent. the Liberals secured 40 per cent. of the members: and for polling 17.3 per cent. of the vote the Conservatives secured 20 per cent. of the seats.

In this regard it is also interesting to compare the standing of some of the candidates at the end of the first and final counts. The standing is as follows:

	Name.	Party.	First Count.	Final Count.	Order of Election.	
1.	Dixon	Labour	11,586	4,312	1	
2.	Johnson	Liberal	4,386	4,312	2	
3.	Armstrong	Labour	2,767	4,283	8	
4.	Cameron	Liberal	2,402	4,312	7	
5.	Ivens	Labour	1,928	4,312	3	
6.	Haig	Conservative	1,893	4,312	4	
7.	Stovel	Liberal	1,743	4,312	6	
8.	Rogers	Liberal	1,541	4,010	9	
9.	Russell	Labour	1,535	3,520	11	Defeated
10.	Tupper	Conservative	1,500	3,583	10	
11.	Dick	Independent	1,307	....	12	Defeated
12.	Christie	Conservative	1,274	....	16	Defeated
13.	Queen	Labour	1,253	4,312	5	

Here we see that the changes do not affect the percentage of representatives from each party. The first change we notice is the difference in the order of election, which is really not very great. The only change of any importance is the replacing of Russell by Queen, each of whom is a member of the Labour party. These results must be viewed with caution, inasmuch as the results in the first count may be misleading, whereas the results in the final count have been obtained by a scientific analysis of the will of the electorate. In other elections the results in the first count may be entirely different from the results in the final count.

The summaries show the uphill battle an independent candidate must make. Although they started with practically the same number of preferences as the Conservative Party, they eventually lost their votes, whereas the Conservatives gained two seats. The Independents must rely upon their own meagre individual following, whereas the members of recognized parties help each other.

The opponents of Proportional Representation state that the expenses of an election under that system are greater than the results warrant. Of course this is a question to be decided by the organization wishing to adopt the system. The defence is that the results are so accurate and representative that the expense should be secondary. By subsection 2 of section 169 of The Manitoba Election Act every candidate who is not elected or who does not receive a number of first choices equivalent to one-fourth of the quota forfeits his deposit of $200. This resulted in twenty-five candidates losing their deposits and adding $5,000 to the Provincial Treasury. This sum should more than cover the additional expenses.

It has been said that this penalty is much too severe. In some other places it is considerably lower. However, in my opinion this stiff penalty had a very salutary effect in this election, and prospective candidates in Winnipeg at least now know that they must be well and favourably known to receive sufficient votes to even receive their deposit back, let alone having any chance of being elected.

In addition to the expense of such an election the opponents state that the system is cumbersome and unwieldy. The system is more complex than the ordinary style of voting, and success depends upon the amount of instruction given to and the capacity of the organization for counting and sorting the ballots.

In the Winnipeg election Mr. Ronald Hooper was engaged as adviser to the returning officer. He secured the services of Mr. C. C. Ferguson, of The Great West Life Assurance Company; of Major McLean, Professor of Mathematics at Manitoba University; and of Mr. A. E. Parker, Editor of Canadian Finance. To these gentlemen and to their staff, mostly employees of The Great West Life, is due in a very large measure the success of the election in Winnipeg. They were engaged in counting the ballots from 5 p.m., Tuesday, the 29th of June, until 2 a.m., Saturday, July 3rd, during which interval they spent forty-five hours in actual work. Approximately the first ten hours were taken up in sorting the ballots which had not been touched by the deputy returning officers. Considering the heavy turnout of voters and the unusually large number of candidates this was a comparatively short period of time. It is estimated that the staff handled over 110,000 ballots, since many were handled more than once.

It was stated that the voters would be so confused with the ballot that they would congest the polling booths. The number of voters who turned out—namely, 48,246—was the largest on record for Winnipeg, and though some of the polling booths were two hours late in opening it was stated that there was no more congestion than in other elections. At the opening of the late polls, however, there were quite a number of voters lined up waiting to enter. At five o'clock, the closing hour, there were no voters outside of the booths waiting to get in.

After the first count there were 819 rejected ballots, or a percentage of 1.72 per cent. of the total vote.

In the previous election in Winnipeg under the old system of voting the percentage of rejected ballots was 2.5 per cent. of the total vote. Evidently the voter took more care to mark his ballot under the new system.

Another feature in this regard was the comparatively small number of non-transferable votes. At the final count it was ascertained that 1,847 voters had not marked a sufficient number of preferences on their ballot papers. This meant a loss of only 4 per cent. of the total number of votes, which is a surprisingly small percentage. It is always advisable to mark at least as many preferences as there are members to be elected, and it is not at all a waste of time to give each candidate a preference. In this election it was possible to use a fortieth preference, but the record appears to be held by the voter whose twenty-second preference found a final resting place.

The majority of the rejected ballots were found to have been marked with a cross. The next frequent mistake was the placing of the figure 1 after more than one name on the ballot. Some ballots started off with a cross and then continued with figures. Many of the votes became non-transferable, owing to the fact that they either bore too many figures of the same value, or they failed to keep a sequence of figures.

In order to make Proportional Representation a success the following points must be carried out:

(*a*) Appointment of an efficient returning officer, election clerk, deputy returning officers and staff for counting ballots.

(*b*) The securing of a proper place to count the ballots.

(*c*) Instruction of the voters in how to mark their ballots. Best results in this are obtained through the medium of the press. It is impossible to reach sufficient voters by means of public meetings.

It might possibly not be out of place to mention a section of The Manitoba Election Act relating to by-elections in Winnipeg. Section 1784 of that Act reads as follows:

"If one of the members for the electoral division of Winnipeg dies or resigns, or a vacancy arises in any other way, there shall be no by-election to fill such vacancy until there shall be two or more vacancies in the representation, when the vacancies shall be filled by the holding of an election of two (or more) persons in the same way as at a general election in Winnipeg, and the Clerk of the Executive Council shall then issue a proper writ of election accordingly."

Under this section it would be impossible for the Government to grant a portfolio to a member for Winnipeg without losing a seat. This difficulty, however, has been overcome by an amendment to The Manitoba Legislative Assembly Act.

Another section deserving of passing notice is section 256. This section gives the returning officer a casting vote in case of a tie, but excepts from this the city of Winnipeg. Under Proportional Representation if all ballots are properly marked a tie cannot take place; but until that day comes there is still a possibility of a tie, and the simplest means possible should be taken to break it.

A third section is in regard to a recount. Section 261 of The Manitoba Election Act requires a deposit of $25 to be made by a candidate desiring a recount. Section 265 of the same Act provides for the payment of the expenses out of this sum if the candidate fails to gain election on the recount.

Inasmuch as the counting of ballots under Proportional Representation is very accurate, a recount would not make any material alteration in the results. The expense of such a recount, however, would be considerable, and the deposit of $25 would be insignificant. A much larger deposit should be demanded, inasmuch as the final count in an election under Proportional Representation is bound to be close and likely to be productive of many recounts unless a substantial check is placed upon it.

Before bringing this report to a close I wish to express my indebtedness to the officials already mentioned above, to the returning officer, Mr. Monkman, and to other members of the staff, too numerous to mention by name, for their kindness, willingness and patience in explaining the inner workings of Proportional Representation to me.

I have the honour to be, Sir,

Your obedient servant,

(Sgd.) A. S. Winchester.

Mr. Hill, from the Special Committee to which was referred Bills (Nos. 68 and 69) of the Session of 1920, to report upon the system of Proportional Representation, presented their reports, which were read as follows:

Your Committee, to which was referred Bills Nos. 68 and 69, met during the recess and heard arguments for and against the adoption of the system of electing members to the Legislative Assembly as set forth in the said Bills. Your Committee regrets that after hearing these arguments and after considerable discussion it was impossible to arrive at a unanimous conclusion of recommendation. Your Committee, therefore, presents for your consideration the report of the majority of the members of the Committee, the report of the minority of the members of the said Committee, the arguments advanced by the advocates and opponents of the said system, and an outline of Parliamentary action in the United Kingdom, Tasmania and Canada, as furnished to the Committee, and a statement showing the interest in the question in the Province of Ontario.

All of which is most respectfully submitted.

CONCLUSIONS AND RECOMMENDATIONS OF THE MAJORITY OF THE COMMITTEE.

Your Committee have been impressed with the arguments in favour of the adoption of Proportional Representation in Ontario, and are of opinion, in view of the fact that its adoption is a plank in the platform of three of the political parties and of the expressions of desire on the part of the G.W.V.A. and other bodies and the expressions of opinion in England, and the satisfaction with which the system has worked out in other countries, that steps should be taken towards its gradual adoption in this province. The Committee feel that it would be unwise to adopt it immediately for the whole Province of Ontario because of the difficulties in securing experienced officers to administer the Act and also because of the lack of familiarity of the public generally with the objects to be attained and the method of count. The Committee appreciates that so far as the voter himself is concerned, the duty which he is called on to perform at the polling booth is not more difficult than under the present system, but are apprehensive that its adoption on a wide scale, without previous education, might tend to confusion and misunderstanding to such an extent as to make the system unpopular at the start. There is also this difficulty to be contended with: With the exception of the City of Toronto there is no city having a greater representation than two members. As Proportional Representation requires large constituencies returning three or more members, it would be necessary, should the membership of the House remain as it is at present, that urban and rural sections of the country would have to be placed together as one constituency, which would not be regarded with favour by either those dwelling in the cities or in the country districts, the probability being that both these bodies would feel that the other would obtain an undue advantage under such a system. Northern or New Ontario, by reason of its sparsely-settled nature, also renders it problematical whether elections could be held under such a system in that portion of Ontario, owing to the distances that would necessarily have to be covered. Your Committee are, however, of the opinion that the system should be tried out in certain constituencies at the next election. In order to make such experiments a success it should be tried out in places where no one party would reap an advantage at the expense of another. Your Committee have therefore come to the conclusion that the system should be tried out in both urban and rural constituencies. The urban constituencies which are most adaptable for such an experiment would be the cities of Hamilton and Ottawa, or, in the alternative, it could be tried out in the City of Toronto. Your Committee feel that it would be advisable that a group of constituencies be formed in Eastern Ontario and a group in Western Ontario. After considering the various constituencies as they are at present, your Committee would recommend for this purpose that the present constituencies of Carleton, North and South Lanark, Leeds, Grenville and Brockville be united into one district, returning six members. In Western Ontario your Committee recommends that the present constituencies of North and South Brant, North and South Waterloo, and North and South Oxford should be united and that they elect six members. The number of names on the voters' list in the

Eastern group, according to the return from the records of the General Election to the Legislative Assembly in 1919, is as follows:

Carleton	12,815
Lanark, North	8,941
Lanark, South	10,849
Leeds	10,690
Grenville	10,396
Brockville	10,932
Total	64,623

The number of voters in the Western constituencies were as follows:

Brant, North	10,746
Brant, South	17,145
Oxford, North	14,820
Oxford, South	13,720
Waterloo, North	21,623
Waterloo, South	19,182
Total	97,236

Your Committee have had before them and have considered the question of adopting some method whereby, in the event of more than two candidates running in a single-member constituency, some method could be adopted whereby the candidate to be elected should necessarily obtain more than 50% of the vote cast. There are instances at present in the House of Assembly where members have been elected from constituencies where several candidates have run in which the candidate elected has obtained less than one-third of the total vote cast. In such cases he has been elected a member although two-thirds of the voters voted against him. It would appear to your Committee that if the single transferable vote system was adopted in single-member constituencies that in such an event the member elected would be the choice of over 50% of the voters. This would be a step towards the ultimate adoption of the single transferable vote, with group constituencies all over the province, and your Committee recommends that its adoption for single-member constituencies be enacted by the Legislature.

Your Committee have also considered the question of permitting municipalities, should they so desire, to elect their municipal bodies by means of Proportional Representation, and it recommends that The Municipal Act be amended to permit municipalities to so elect their councils.

The recommendations of your Committee may be summarized thusly:

1. That the cities of Ottawa and Hamilton be each allowed two members, to be elected by these cities as a whole under the single transferable vote system of Proportional Representation, or, in the alternative, that the members from the City of Toronto be elected by this system.

2. That the present constituencies of Carleton, North and South Lanark, Leeds, Grenville and Brockville, together elect six members under the single transferable vote system of Proportional Representation.

3. That the constituencies of North and South Brant, North and South Waterloo, and North and South Oxford, together elect six members under the single transferable vote system of Proportional Representation.

4. That the rest of the province select their members in what is known as single-member constituencies, but that the transferable vote be used in the election of such members.

5. That municipalities be permitted to elect their councils by means of the single transferable vote system of Proportional Representation.

6. That legislation be forthwith enacted carrying into effect the above recommendations.

Your Committee desires to express its appreciation of the invaluable assistance which it has received from Mr. Ronald Hooper, of Ottawa, the Honorary Secretary of the Proportional Representation Society of Canada, who furnished the Committee with much information on Proportional Representation. Your Committee also desires to thank the Honourable the Minister of Labour in the Dominion Government for his kindness in extending Mr. Hooper leave of absence from the Department to attend the sittings of the Committee. Your Committee also expresses its appreciation to Mr. John R. McNicol, of Toronto, the President of the British Representation League, for his presentation of the arguments against the adoption of the system in this province. Your Committee also thanks Mr. A. S. Winchester, of Toronto, for his valuable services as Secretary of the Committee.

HAMNETT P. HILL,
Chairman.

Dated this 14th day of February, 1921.

MINORITY REPORT.

The undersigned members of the Parliamentary Committee on Proportional Representation will not repeat the many arguments put forth by the Proportional Representation League or by the British Representation League, which are fairly well covered in the material attached to the dual report of your Committee, but will content themselves with making certain defined conclusions, viz.:

1. No steps should be taken to consider the question of electoral representation of the people in the Legislature of Ontario until after the census is completed in 1922.

2. A safe principle to be borne in mind is that of representation by population, which is very different from Proportional Representation. We believe that many people are confused by the similarity of the names, and are not informed on the principles involved.

3. In a new country like Canada, where so many people of different races and languages make a new home, efforts should be made to assimilate and merge them into Canadians, rather than segregate them into separate communities with special representation.

4. Proportional Representation would bring many candidates into the field, dividing up the vote on non-essentials and electing representatives of minorities who have not behind them popular approval for their fads and fancies.

5. Proportional Representation means that a minority may often, by using the balance of power, dictate terms to the majority in the Legislature of Ontario.

6. In a sparsely-populated country like most of Ontario the five to eight-member constituency would be too large, all members trying to represent the whole and none representing any particular part. Most members have enough to do now to represent one single constituency and travel about it.

7. Proportional Representation makes for weak groups; weak groups or minority groups means log-rolling and compromise; log-rolling means frequent changes of government, with change of policy, without going to the people for approval.

8. Instability of government in a new country which depends on government policy for development would wreak untold harm in a province like Ontario. The present system generally means majority government for four years, with an opportunity for the Opposition to reverse the Government if the people are not satisfied with its policy. There is always safety in majority rule.

9. The gerrymander in its worst form could be utilized in framing large constituencies; farmers could be hived so that townsfolk could reduce the farmer representation in the House, and *vice versa*.

10. Present rural constituencies situated around cities of less than 50,000 population under Proportional Representation would be dominated entirely by the city vote; small towns and villages in a well-populated rural constituency would often fail to get representation. When 13 per cent. in Winnipeg get no representative, that may occur in many places in Ontario.

11. In the proposals of other members of this Committee placed before the House, the Eastern Proportional Representation Riding, comprising the old constituencies of Lanark, Grenville, Carleton, Leeds and Brockville—population, 64,623—would have six members; unit of population, 10,770.

The Western Proportional Representation Riding, comprising two Brants, two Oxfords, and two Waterloos—population, 97,236—would have six members; unit of population, 16,206. There is not much proportion about this to begin with.

11a. One realizes that it is impossible to get exact representation, but when some ridings have a population of sixty thousand and others ninety thousand, it is time to apply a little more fairly the "One man one vote" principle, which should bring representation by population.

12. Cost of elections to the candidate over a large constituency eliminates everyone but the rich man, who can travel the riding and spend plenty of money.

13. An independent candidate running in a single riding can be often elected on a good general policy under the present system. Under Proportional Representation, unless there were several candidates running in the large constituency on the same policy, there would be no chance for this man being elected. He would draw votes from no other source.

14. The British system works well because majorities, consistent with the stability of the country, treat minorities well. Greater progress is made in British communities than in foreign countries practising many forms of Proportional Representation, supposed to safeguard minorities, but actually resulting in keeping the country in a turmoil and never giving it the solid progress that we enjoy in Canada.

15. Your members thus reporting think that the Legislature should consider very carefully before making changes in these trying times; changes that are advocated by a society of individuals rather than by the solid thinking citizens with property rights throughout the provinces. It will be time enough to act when Boards of Trade, Farmers' Associations and Ratepayers' Associations memorialize the Government that a change from the present tried and satisfactory system to Proportional Representation is desired.

All of which is respectfully submitted.

WILLIAM H. PRICE,

For Minority of Committee.

THE ARGUMENT OF THE ADVOCATES OF PROPORTIONAL REPRESENTATION AS PRESENTED TO THE COMMITTEE BY THE PROPORTIONAL REPRESENTATION SOCIETY OF CANADA.

It is claimed that Proportional Representation makes the elected Assembly more accurately representative of the electorate. The present electoral system in single-member constituencies has evolved from more elementary methods of electing representatives. Great changes have been made since the time when a comparatively small electorate, on a restricted franchise, elected the House of Commons in the United Kingdom.

British political genius has adapted existing Parliamentary institutions to meet the changing conditions. By gradual steps the Cabinet system of government responsible to Parliament, the party system in Parliament, the broadening of the franchise, the machinery of government, has been readjusted to maintain the elected Assembly as the true mirror of the nation.

Proper representation of minorities is regarded as one of the essentials of government by the people. Minorities are finding their way into the Legislatures in separate groups under the present system. Minority representatives are frequently elected in single-member constituencies owing to the majority of voters dividing into groups in support of rival candidates. It is urged on behalf of Proportional Representation that the election method should be adapted to reproduce the opinions of the electors in their true proportions.

Proportional Representation is British in origin. It is advocated by many representative British statesmen most profoundly attached to the British constitution as being in accordance with the principle of building upon the experience of existing institutions rather than pulling down or launching into a sea of experiment. Some of the most prominent advocates of its adoption in Great Britain are: Rt. Hon. A. J. Balfour, Rt. Hon. H. H. Asquith, Lord Robert Cecil, Lord Hugh Cecil, the Lord Chancellor, Lord Birkenhead, Sir John Simon, K.C., Viscount Bryce, Lord Morley, Earl Selborne, Earl Grey, Lord Curzon, Lord Milner, Lord Lansdowne, the Archbishop of Canterbury, and Cecil Harmsworth, M.P. According to the Hansard Report of Debates in the House of Commons at Westminster, January 30th, 1918, Lord Robert Cecil said:

> I believe that proportional representation would make the House of Commons more accurately representative of the electorate of this country. This is the true function of representative institutions; that is the true principle of democracy. I advocate it because I feel it would restore and increase the character and the authority of the House, and I advocate still more because I am convinced that in the course of the next few years we in this country and, I believe, the people of every country in Europe, are going to have great tests applied to the solidity and the reasonableness of our institutions and to many of our most cherished beliefs. I wish to see our constitution made as strong, as vigorous, and as well founded as possible, in order to resist the shock of the times that are coming upon us.

The present Lord Chancellor, Lord Birkenhead, has said as follows:

> Experience, where the system has been put into operation, has consistently and convincingly refuted the criticisms which have been directed against it, and I, for one, feel unshaken confidence that within no distant period its acceptance as a theory will be universal, and that it will be put into practical application wherever in the civilized world representative institutions prevail.

The authority of an elected Legislature is based on the representative principle. Without Proportional Representation the tendency is towards the lack of cohesion in political action. Some notable evidence of the growing instability of the party system has been furnished by general election in several provinces of Canada in recent years. In countries where Proportional Representation is the method of election the results would seem to be favourable to party stability. M. Georges Lorand, one of the party leaders in the Belgian Chamber of Representatives, is reported as saying, in a speech in London, December 3rd, 1913:

> We have used it (Proportional Representation) for thirteen years, and we have had six general elections with the new system, and the result is that not a single party, nor fraction of a party, is opposed to the reform; its extension is inscribed in the programme of all the parties.
>
> It has been said by opponents of Proportional Representation that it would lead to the splitting of parties, but it has had the opposite effect: parties, far from splitting into fragments, have brought their ranks closer together, but within these ranks they have found room for such diversity of opinion as may exist, nay, as is essential within any living and active political force.

In the Manitoba provincial elections held on June 29th, 1920, Winnipeg elected representatives by the method of Proportional Representation, while the remainder of the constituencies in the province were polled as single-member constituencies. In Winnipeg the electorate divided itself into three groups of opinion—Labour, Liberal and Conservative. Outside of Winnipeg, in the single-member constituencies, five groups were elected—Liberal, Conservative, Farmer, Labour and Independent.

The constituency of Winnipeg had to elect ten members on one ballot by what is called the single transferable vote, under Proportional Representation. Forty-one candidates were nominated for the ten seats. The number of valid ballots cast totalled 47,427. The single transferable vote allowed the voters to elect the candidates they preferred in proportion to the voting strength of the parties in the election. Four Labour representatives were elected, four Liberals (including one woman candidate), and two Conservatives. This result reflected the percentage of votes cast by each party: all parties were satisfied that they secured fair representation in proportion to votes cast.

In the constituencies outside of Winnipeg the electors voted for candidates by the usual method of marking X against a name. Minorities in the single-member constituencies are thus unable to secure representation. But in some of the single-member constituencies, where several candidates were nominated to contest one seat, the majority of voters failed to secure representation owing to the votes being split between two or more candidates.

For example, in Brandon City the Labour candidate secured election with 2,007 votes, while 2,648 votes for other candidates failed to secure any representation. The votes were cast in Brandon as follows:

Albert E. Smith (Labour)	2,007
S. S. Clements (Liberal)	1,403
Brig.-General Kirkcaldy (Conservative)	1,245

This result in a single-member constituency is typical of several. In the electoral division of Emerson 1,681 votes failed to secure representation, while 989 votes elected the representative. The votes were cast in Emerson with the following result:

Dmytro Yakimischak (Farmer)	989
Roy Whitman (Conservative)	925
John D. Baskerville (Liberal)	756

In Manitou constituency 1,827 votes were ineffectual, while 1,185 secured the seat as follows:

John S. Ridley (Conservative)	**1,185**
G. T. Armstrong (Liberal)	**901**
George Compton (Farmer)	**926**

In Rockwood the elected candidate obtained 978 votes; 977 votes were cast for another candidate, and 638 votes for a third candidate.

Results such as the above in single-member constituencies tend to introduce an element of instability into the Legislature. Members are sent to represent constituencies by a minority of votes, while majorities in the constituencies are unrepresented.

Such elements of chance are entirely eliminated by the more effective voting method of Proportional Representation. By grouping the constituencies to elect three or more members on one ballot with the single transferable vote, all parties are assured of representation in true proportion to votes cast, as demonstrated in Winnipeg.

There are instances in Canadian elections where the total votes for one of the parties have failed to elect one representative throughout an entire province. The single-member constituencies make it possible for one party only to secure representation in each electoral division.

Thousands of voters are deprived of representation at every election. British Columbia Provincial elections in 1912 resulted as follows:

Party.	Votes polled.	Seats.
Conservative (McBride Government)	51,181	31
Liberal	21,261	0
Socialist	12,087	2

The Conservative Party also secured nine other seats uncontested.

In the Federal elections, 1911, British Columbia constituencies failed to elect one Liberal representative in seven seats, although more than two-sevenths of the total votes were cast for Liberal candidates. British Columbia's representation in the House of Commons resulted as follows:

Party	Votes polled.	Seats.
Conservative	25,622	7
Liberal	16,350	0

The general election in 1904 produced an equally notable result. The minority in Nova Scotia failed to secure representation in the House of Commons, while the majority took 18 seats, though the minorities scattered in single-member constituencies polled more than forty per cent. of the total votes, thus:

Party.	Votes polled.	Seats.
Liberal	56,526	18
Conservative	46,131	0

The element of chance in single-member constituencies is thus liable to deprive minorities of any representation, but there are instances in Canada where it has tended to set up minority rule. The Federal elections in 1896 resulted in a minority of votes obtaining the majority of seats:

Party.	Votes polled.	Seats.
Conservative	416,640	88
Liberal	405,506	118
Independent Parties	76,900	7

Such results seem liable to occur again in Provincial and Federal elections as long as members are elected in single-member constituencies. Obviously the failure of the electorate to secure accurate representation in accordance with the political opinion of the country may tend to shake the confidence of some groups of opinion in political action. The following table gives results of the general elections in the United Kingdom, December, 1918. A column is attached giving the estimate of seats in proportion to votes:

Contested Seats (excluding Universities).

Parties.	Votes polled.	Seats obtained.	Seats in proportion to votes.
Coalition and Allied:			
Coalition Unionist	3,488,543	285	184
Coalition Liberal	1,419,992	103	73
Coalition Labour	48,957	3	3
National Democratic Party	230,912	12	12
Independent Unionist	375,914	25	20
Total Coalition	5,564,318	428	292

Contested Seats (excluding Universities).

Parties.	Votes polled.	Seats obtained.	Seats in proportion to votes.
Non-Coalition:			
Liberal	1,282,122	25	67
Labour	2,292,102	47	120
Socialist and Farmers	39,657	1	2
Co-operatives	51,133	1	3
National Party & Nationalists	92,547	2	5
Independents	375,351	5	20
Total Non-Coalition	4,132,912	81	217
Majority for Coalition	1,431,406	347	75

This distorted representation, due to the method of election in single-member constituencies has been much commented upon by British statesmen. It is said to be responsible for some of the lack of confidence in parliamentary methods, since manifested in the ranks of organized labour. Lord Selbourne said of it, in a letter to *The Times*:

> At the general election the Labour party polled in contested seats in Great Britain 2,292,102 votes. This poll entitles them to 120 seats in Great Britain in respect of the contested constituencies alone; but the total number of seats they obtained in contested and uncontested constituencies was 59. The result is that the Labour party know they are not fairly represented in the House of Commons, and many of their leaders, whose presence they consider essential to the proper consideration of their business, have failed to obtain seats in the House of Commons. The consequence is that they look less and less to the House of Commons as the place where the questions which interest them can be properly considered and dealt with, and that there is an ever-increasing tendency to deal with these questions outside Parliament. This fact is fraught with danger . . . . At the next general election nothing is more probable than that the Unionist party will poll a sufficient number of votes to entitle them to a representation of 200 or more, but that the number of Unionist members returned will be 100; per contra, the Labour party may receive gross over-representation; but that will be no remedy for past injustice—it will only be aggravation of the evil.

This lack of confidence in constituted government is evident in Canada also. The Royal Commission on Industrial Relations, in their Report to the Dominion Government, stated as follows:

> The complaint was made at several places that legislation enacted at the request and for the benefit of labour was not adequately enforced. . . . The belief appears

> to be entertained that the governments, both local and federal, are largely controlled by the financial interests, and that their influence was manifest not only in legislation, but in the executive action of the several governments. . . . These considerations, it was alleged, had shaken the faith of the working classes in governments as at present constituted.

The exaggerated swing of the pendulum mentioned by Lord Selbourne may be produced in single-member constituencies by a comparatively small change over of votes. The following are examples of this exaggerated change in the representation of the House of Commons in Canada, due to the swinging over of minorities in single-member constituencies:

Federal Elections, 1908.

Party.	Votes polled.	Seats actually obtained.	Seats in proportion to vote.
Liberal	594,270	135	114
Conservative	552,134	86	107
Majority		49	7

Federal Elections, 1911.

Party.	Votes polled.	Seats actually obtained.	Seats in proportion to vote.
Conservative	669,594	134	115
Liberal	625,103	87	106
Majority		47	9

The Liberal Party polled 42,136 more votes than its opponents, and won 135 seats in the House, a majority of 49 seats over its opponents. But, as a matter of fact, the Liberal Party won 49 of its seats by majorities amounting in the aggregate to only 6,543 votes. So that if slightly more than half that number of voters in those constituencies had voted differently the Liberal majority in seats would have been wiped out.

In the 1911 election the Conservative party won over the support of a few thousand voters, and, as a result, secured a majority of 47 seats in the House of Commons. But the Conservative party won 47 of its seats by combined majorities, amounting to only 5,094 votes. So that if slightly more than half that number of voters in those constituencies had voted differently the Conservative majority in seats would have been wiped out.

These figures mean practically this: that in 1908 some 6,543 voters swung the balance in favour of the Liberal party being returned to power; while in 1911 some 5,094 voters effected the overthrow of the Liberal Government and the creation of a Conservative regime.

In countries where Proportional Representation is the method of election there is no such exaggerated change. Small floating minorities cannot dominate any constituency under Proportional Representation. Experience in Belgium, Sweden, Tasmania, Switzerland, New South Wales and elsewhere, according to election results, would seem to point to greater stability in the Legislature and more continuity of policy when members are elected by Proportional Representation.

The following are election results for the Tasmanian House of Assembly:

	1909.		1912.		1913.	
Party.	Seats in proportion to votes.	Seats actually obtained.	Seats in proportion to votes.	Seats actually obtained.	Seats in proportion to votes.	Seats actually obtained.
Labour	11.69	12	13.66	14	13.99	14
Anti-Labour	18.31	18	16.34	16	16.01	16

Similar examples of accurate representation in accordance with the voting strength of the parties are available from other countries.

The case for Proportional Representation is summed up by its advocates thus:

1. It will reproduce the opinions of the electors in Parliament and other public bodies in their true proportions.
2. It will ensure that the majority of electors shall rule and all considerable minorities shall be heard.
3. It will give electors a wider freedom in the choice of representatives.
4. It will give representatives greater independence from the financial and other pressure of small sections of constituents.
5. It will ensure to parties representation by their ablest and most trusted members.

THE ARGUMENT AGAINST PROPORTIONAL REPRESENTATION AS PRESENTED TO THE COMMITTEE BY THE BRITISH REPRESENTATION LEAGUE.

Encourages Investigation.

We encourage any legitimate effort to ensure, if possible, a more correct expression of public opinion by the ballot. We vigorously protest against the adoption of Proportional Representation, and its immediate sequence "group government," without a full, wide and thorough investigation into the defects of this system as well as its merits.

Long Propaganda.

The Proportional Representation League has long advocated in favour of its system and equally long attacked the British system. Through the ready quotation of figures pertaining to foreign Governments using some one of the known 300 systems of Proportional Representation, and the lack of their investigation by some of our legislators, and the further fact that the general public knows little about Proportional Representation or its supposed success in foreign countries, and that there has been no organization to focus opposition against it, the Proportional Representation League has been able to have its system adopted in a small way in some parts of Canada.

Proportional Representation Claims.

1. The Proportional Representation League claims that the British system of voting and electing members of Parliament does not give minorities representation. Example: It is claimed that while many Liberals voted in Toronto in the 1917 general election that no Liberals were elected, and, further, that other minorities, such as temperance, single-tax, Socialist, Labour, liquor, race or creed "groups" are also without representation. Under Proportional Representation it is claimed that any or all minorities may have special representation.

2. The Proportional Representation League further claims that under the British system in which the single-member constituency is almost (there are a few exceptions) universal, that if three or more candidates are in the "field" that

frequently the victor is returned by a "relative," not an absolute majority. Example: The recent East Elgin by-election.

3. The Proportional Representation League also claims that the "parties" returned under the Proportional Representation system of voting will represent their relative strength in the country, and that large majorities will be a thing of the past.

HOW PROPORTIONAL REPRESENTATION OPERATES.

A five (or more) member constituency is the size recommended.

The intention is that a voter shall vote for five candidates of the list nominated. Experience is that in a five-member constituency from 20 to 30 candidates will "stand" for election. The voter must place a numeral after the names of his five favourites in the order of his preference—1-2-3-4-5. The returning officer first ascertains the "quota" which is the minimum number of votes required to elect a candidate. The "quota" is found by sorting the ballots and counting the number of "first" preferences and by dividing this number by the number of the candidates, plus one. In a five-member constituency the divisor is six. Example: Suppose there are 12,000 "first" preferences: six, divided into 12,000, gives 2,000. He then adds one to this number, making 2,001, which number becomes the "quota." He declares elected all candidates having 2,001 votes or more. Suppose candidate No. 1 received 4,002 "first" preferences. He has, therefore, the surplus of 2,001 votes. The returning officer counts these ballots again so as to divide the surplus votes according to the preference of the voters. Suppose he finds that on these 4,002 ballots candidate No. 2 has 500 second preferences, No. 3 has 1,500 second preferences, No. 4 1,250 second preferences, No. 5 751 second preferences. He then determines the percentage of the vote that No. 1 can give away; in this case 50%. He then divides the "second" preferences according to this percentage, and gives No. 2 fifty per cent. of his 500, or 250. No 3 thus gets 750, No. 4 gets 625, and No. 5 gets 376. This process continues until five candidates receive the "quota."

PROPORTIONAL REPRESENTATION INVENTORS AND WHERE IT IS IN FORCE.

The best known systems of Proportional Representation are those of Hare, d'Hondt, Hare-Clark, Gregory, Droop and Bailey, and either one of these systems or a modification is in operation, wholly or partially, in Sweden, Finland, France, Belgium, Portugal, Switzerland, Queensland, West Australia, Denmark, Servia, Wurtemberg and Tasmania. And in Canada, in Winnipeg for provincial parliamentary elections.

REASONS WHY PROPORTIONAL REPRESENTATION IS NOT SUITABLE FOR CANADA OR ONTARIO.

Our British system Election Acts set out:

1. A citizen shall have one vote.
2. A vote shall be recorded by marking "X" after one candidate's name.
3. A constituency shall elect one member.
4. The candidate receiving the highest number of votes shall be elected.
5. The "party" electing the greatest number of members shall govern.

No other system ever devised is as intelligible or speedy.

Under Proportional Representation the constituencies are large; return five or more members; the voter must at least use three of his five preferences; the candidates to be elected to be determined as outlined in a previous paragraph; the largest number of "groups" than can form a working majority will govern. No other system is as unintelligible, complicated, or takes such a wearisome time to determine the victors. Under Proportional Representation in Winnipeg the ballots were counted 30 times or more, and almost a week elapsed before the result was definitely known. In one election in Tasmania it was found necessary to count the ballots more than 100 times. In the late Winnipeg Municipal Election, under Proportional Representation, a large percentage of the ballots were spoiled, and the people were distracted waiting for the results to be announced.

Minority Representation.

Notwithstanding the fact that in Canada the Parliament is usually divided into two great parties over some national question under the British system, members feel that they are elected to represent the country's interests as a whole. Our Parliaments have always heeded public opinion. Example: Sir Wm. Hearst and the O. T. A., or Sir Wilfrid Laurier and the S. A. contingents. In the past, "races," "creeds," or "classes" have always found ready defenders in our Parliaments without specially electing men to do so. Under Proportional Representation large constituencies and transferable votes conduce to the electing of "groups" of one brand or another. Example: In the late Belfast Municipal Election, under Proportional Representation, the following "groups" were elected to council—Unionists, Sinn Fein, National, Socialist, Liberal and Labour. A formerly industrious harmonious council has been filled with strife, and it is doubtful if the minorities will receive equal treatment to that which they formerly received when the said council was overwhelmingly Unionist.

As to "Relative" and "Absolute" Majorities.

The British system of small constituencies and the British system of "two-party" government eliminates race, creed or class candidates. Our constituency fights are generally between well-known men. The better known, the more interest is taken; indeed, it takes a good fight to get the voters out, and, therefore, under our system only in rare instances does the victor not receive an absolute majority Even in three-cornered fights the victor has an absolute majority as frequently as a "relative" majority.

Large government majorities create stability and harmony, and have not been proven tyrannical or unfruitful, but, on the contrary, invariably enact much useful legislation.

Proportional Representation, on the other hand, destroys the "two-party" system and results in the "many-party" or "group" system of government. There are six main "groups" in the Belgian, and a throng of "groups" in the French Parliaments, and similarly in other foreign countries. Parliaments in the foreign countries are not dissolved when the "bloc" or combination of "groups" forming the government is defeated. The "groups" merely realign under another leader. At best this is only government by "compromise." Under the British system, when a government is defeated in the House on any policy an appeal to the people is made, and the people decide the issue.

THE BRITISH SYSTEM ASSIMILATES IMMIGRANTS.

The principal countries in which Proportional Representation is at present in force are old, compact and populous countries, having no immigration into them. They speak one, or at most two languages. Ours is a new country, with two main languages, and all other languages according to the origin of our large influx of immigrants. Our present system of single-member constituency and two-party government induces them to take sides and interest themselves in our national questions, and Canadianizes them. Proportional Representation would divide them along the lines of their races and creeds and de-Canadianize them.

EXCESSIVE COST OF PROPORTIONAL REPRESENTATION ELECTIONS.

If it is costly for a candidate to run an election under present conditions, say in Brockville, it will cost six times as much for the same candidate to run an election in the combined counties forming the new eastern riding. Substantial, sound business men will refuse to offer themselves. An indifferent electorate will refuse to vote, and our Legislature will be reduced to impotence.

BY-ELECTIONS.

By-elections under the British system serve good purposes. They illustrate the trend of pubilc opinion and fill parliamentary vacancies. The cost of running a by-election is moderate, but under Proportional Representation a by-election will be like a "young" general election. To fill a vacancy in a six-"seat" constituency will necessitate the whole constituency voting again, and the cost will be excessive. One of these two things will happen: successful men will refuse to be "bled," and will not be candidates, or only rich men can be candidates.

TICKET PLUMPING.

The Winnipeg Parliamentary Election, which was carried on under Proportional Representation regulations, appears to the public to have been a pronounced failure, at least as far as the claims for Proportional Representation are concerned. Thirteen per cent. of the electors voted for the Independents, but none were elected; 13.7 per cent. voted Conservative, and two were elected; 30.4 per cent voted Liberal and four were elected; 42.5 per cent. voted Labour-Socialist, and four were elected. Three of the latter "group" had previously been tried for sedition and were, or are now, serving terms in the penitentiary. They were elected as a result of "ticket" plumping. The "groups" were not returned in accordance with their apparent strength. The electoral machinery was costly, and the citizens were exasperated through a week of counting ballots to learn the victors. It is still a puzzle to figure how the Labour-Socialists only returned four members, considering that they secured such a large percentage of the first preferences as well as their share of transfers.

OPINIONS AGAINST PROPORTIONAL REPRESENTATION.

In the British House of Commons in 1908 a bill promoted by the Proportional Representation Society was rejected.

2. Again, in 1910, a Royal Commission of the British Parliament, after a most thorough investigation, rejected Proportional Representation.

A few excerpts from the said 1910 report:

A. "The question has been raised whether it would be necessary to take any precaution against frivolous candidatures."

B. "Failures to exercise a second preference will be numerous: failures to exercise a third will be far more so."

C. "A glance at the list of private members' bills and motions or at the deputations received by the Ministers, will show that the number of 'parties' represented directly or indirectly in the House of Commons is incalculable. . . . Even generally hostile witnesses were apparently unable to name any considerable 'minority' in the sense, which at present is absolutely deprived of representation."

D. "The dangers of drawing inferences from the experience of any one country is illustrated by the fact that every one of the six states which have adopted Proportional Representation has selected a substantially different form of it."

E. "If it is decided that Proportional Representation in some form ought to be introduced, each of the systems would have a good claim to serious consideration, for each has conspicuous merits not shared by the others."

F. The advocates of the transferable vote remind us that the object of a representative body is to represent; but the objects of a representative government is not only to represent, but to govern. *"We are unable to recommend its adoption in existing circumstances for elections to the House of Commons."*

3. Again, in 1917, after a conference on electoral reform, in a letter to the Prime Minister from the Speaker of the British House of Commons, we read:

> "Every candidate at the election of a Member of Parliament for any county or borough shall be required to deposit with the returning officer at the time of his nomination £150 ($750)." (Note—That will stop a lot of "frivolous" candidates.) "If a candidate is not elected, and the number of votes polled by him does not exceed . . . one-eighth of the total number of voters polling . . . the deposit . . . shall be forfeited to the treasury."

4. While the said letter of the Speaker does recommend that if any five-member constituencies are formed the election of same shall be according to some brand of Proportional Representation, it does not recommend a system. The fact is, there are no five-member constituencies in England, and if there were the $750 deposit would eliminate all fad and crank candidates. Further, as far as can be learned, the Speaker's recommendations were not adopted.

5. Hon. Mr. Meighen, M.P., in a Canadian Press despatch from Winnipeg, November 16th, is reported to have said: "'Group' Government would result in log-rolling, dickering and bargaining: the worst possible form of administration."

6. Hon. Senator Davenport, in the *Outlook,* writes (August issue): "For the moment we are through with experiments—political, social, economic. The probable futility of any considerable third-party movement is obvious, entirely aside from the academic argument in favour of great unity and national single-mindedness, which results from two parties facing each other, as over against a system of log-rolling, coalition groups."

7. The *Outlook*: "We regard the idea of Proportional Representation and 'group' government as interesting in themselves, but not of much practical consequence.

8. Department of Government, Harvard University: "We believe that the desirability of Proportional Representation depends in part, not upon general principles, but upon local conditions."

9. The Providence *Journal,* in a long article, against the European system, says: "In Europe these 'groups' are sometimes able to control the Government by combinations—the 'bloc.' Ministries are thrown down and new ones set up overnight by reckless manœuvring of allied minorities, to the destruction of stability of government and the embarrassment of sound national purposes."

10. The Halifax *Chronicle,* July 7th, 1920, describing "group" government, states: "It is earnestly hoped that the people will profoundly and patriotically consider these facts (foregoing facts against the European system) in view of the efforts now being made to stampede the public in the direction that has got Manitoba in such a deplorable muddle. . . . The 'group' system on the European continent has been anything but satisfactory. They (the groups) are generally classified as they sit—'right,' 'left,' 'centre,' tapering off, respectively, from extreme conservatism to extreme radicalism. . . . The door would be thrown open to all sorts of 'dickering,' compromise and corruption. A government so formed could, in the nature of things, be neither stable nor trustworthy, and it would be practically without responsibility."

11. Hon W. E. Gladstone, M.P., late Premier of Great Britain, speaking on the Redistribution Bill of 1884, is reported to have replied to those advocating Minority Representation and Proportional Representation, as follows: "Well, Sir, we have considered the question much . . . objection in the first place that it was artificial; that it was not known to our usages and our history: where that particular scheme only commanded the assent of a handful; where everybody else was inclined to fall foul of it and attack it. Sir, *we do not see our way to the introduction of what I do not like to call a new-fangled, but a novel and artificial system of that kind.*"

OUTLINE OF PARLIAMENTARY ACTION FOR PROPORTIONAL REPRESENTATION IN THE UNITED KINGDOM.

Government of Ireland Act (1914).

On January 17th, 1913, the House of Commons, by a vote of 311 to 81, provided, by the application of the principle of Proportional Representation, for the election of the proposed Irish Parliament. The Government of Ireland Act (1914) provided for the election of the Irish Senate by the single transferable vote system of Proportional Representation, each province being polled as a separate constituency; and in the case of the election of members of the House of Commons, all constituencies returning three or more members to be elected by the same system. This latter provision was later amended by the House of Lords to provide that all constituencies, with the exception of Dublin University, should return not less than three members.

Shortly after passage of the Act the war intervened and the Act was not put into effect.

REPRESENTATION OF THE PEOPLE BILL.

In the fall of 1916 the Prime Minister, Mr. Asquith, from his place in Parliament, authorized the appointment of a Speakers' Conference to consider the question of electoral reform in Great Britain. In this connection he said:

> "With regard to the parliament which is going to undertake the work of reconstruction after the war, it is eminently desirable that you should provide an electoral basis which will make that parliament reflective and representative of the general opinion of the country and give to its decision a moral authority which you cannot obtain from what I may call a scratch, improvised, and makeshift electorate. Let us see . . . if we cannot work out by general agreement some scheme under which, both as regards the electorate and the distrbiution of electoral power, a parliament can be created at the end of the war capable and adequate for discharging these tasks and commanding the confidence of the country."

The conference sat for several months, and among its unanimous recommendations was one that Proportional Representation should be applied to the election of all members of the House of Commons (except for those representing thirty populated areas), including the representatives of universities.

For thinly-populated areas the alternative vote was recommended (i.e., each voter to have the opportunity of making a second and further preference) in order to ensure that where more than two candidates were running in single-member constituency the elected candidate would represent a majority of the electors, and not, as might otherwise happen, a minority only. Attached hereto is the report of the conference on electoral reform, giving the personnel of the conference, which includes representatives of all parties in the United Kingdom.

The first vote on the question of Proportional Representation (on the instructions to boundary commissioners) was taken in the House on June 12th, 1917, and it was defeated by 148 votes to 141. The bill without the Proportional Representation clauses then passed through the House of Lords, and on January 22nd an amendment restoring Proportional Representation was carried by 131 votes to 42. During the passage of the bill through the House of Commons there had been an increasing demand from agricultural organizations that Proportional Representation should be applied to the counties, and a deputation from these organizations pressed their views upon the House of Lords' Committee, with the result that this Committee prepared a schedule applying Proportional Representation to all parts of the country. On January 29th, 1918, this schedule was carried in the Lords without a division, but was rejected by the Commons the next day by 223 to 113. A new amendment was proposed by Lord Selborne in the House of Lords on February 4th to apply Proportional Representation to boroughs returning three or more members. This was carried by 86 votes to 35. A test division to exclude Birmingham from Lord Selborne's amendment, was taken, and the exclusion was carried (February 5th) by 206 votes to 156. On February 6th a further attempt to embody Proportional Representation in the bill was made in the House of Lords. Lord Lansdowne moved an amendment to appoint a commission to frame a scheme of 100 constituencies chosen from boroughs and counties, to which Proportional Representation should be applied. *This amendment was accepted by the Government and carried in both Houses.* A commission was appointed, local enquiries were held, but the scheme, although its adoption was moved by the *Minister of Education*, Mr. H. A. L. Fisher, was not supported by the Government as such (it having been previously understood that the question should be considered a non-party matter), and was defeated by 166 votes to 110. The speakers in its support included among them two ex-Prime Ministers, Mr. Asquith and Mr. Balfour; Lord

Robert Cecil, Mr. H. A. L. Fisher, Sir Alfred Mond, and Sir F. E. Smith, members of the Government; Lieut.-Col. L. S. Amery, Lord Hugh Cecil, Mr. H. J. Mackinder, Mr. J. A. Mariott, Major J. R. P. Newman, Col. R. A. Sanders, Mr. Leslie Scott, Sir Mark Sykes, and Lord Wolmer (Unionists); Sir Ryland Adkins, Mr. H. G. Chancellor, Mr. C. T. Needam, Mr. Chas. H. Roberts, Mr. J. M. Robertson, Sir John Simon, and Mr. Anuerin Williams (Liberals): Mr. W. C. Anderson and Mr. Philip Snowden (Labour): Mr. J. Devlin, Capt. Gwynn, Mr. Hugh Law, Mr. T. Scanal (Nationalists), and Mr. T. M. Healy (Independent Nationalist).

The non-acceptance of Proportional Representation did not apply, however, to university constituencies, and in December, 1918, the members for the Universities of Oxford, Cambridge, Trinity College, Dublin, the Scottish Universities, and a group of newer English Universities were elected by the single transferable vote. The Scottish group elected three members, and the other constituencies two each.

SLIGO CORPORATION ACT.

In the session of 1918 the British Parliament passed the Sligo Corporation Act, making it compulsory that members of the Sligo Corporation should be elected under the single transferable vote system. In January, 1919, the municipal elections were held, with results gratifying to all parties concerned. Almost immediately there arose a strong demand for the extension of the system to all local government elections in Ireland. "If the new Government," said the *Irish Times*, "really intends to live up to its programme, it will insist that all these elections shall be decided by Proportional Representation. No more beneficial measure of reconstruction could be given to Ireland."

LOCAL GOVERNMENT (IRELAND) ACT, 1919.

As a result of the insistent demand the British Government passed, on June 3rd, 1919, the Local Government (Ireland) Act. The vote in the House of Commons on the third reading was 244 to 42. This Act applies the single transferable-vote system of Proportional Representation to the election of all local representative bodies in Ireland, amounting to about four hundred in number. The system was accordingly used in about 120 towns and urban districts in Ireland in January, 1920, and for the election of some 200 county councils, rural district councils, etc., in June, 1920. The evidence shows that the results gave complete satisfaction to practically all parties. Earl Grey has written of the January elections as follows:

"The number of electors participating in the election was nearly 68 per cent. of those on the register, a record for Ireland, and a figure rarely, if ever, reached in municipal elections in Great Britain. A further notable feature was the good spirits exhibited by the parties toward each other. 'This Proportional Representation election,' wrote one of the Dublin papers, 'was one of the most business-like proceedings that the general public ever assisted at.' This opinion was heard on all sides, and from those who had been active in Irish politics for a generation."

It is now proposed to convene in Ireland a constituent assembly elected by Proportional Representation, in the hope that such an assembly may find a solution to the Irish problem.

THE SCOTTISH EDUCATION ACT, 1918.

The new Scottish Education Act has set authorities for every county and for larger cities, thus largely increasing the size of the districts by which the authorities are elected, and it is provided that the system of election shall be the single transferable vote. The county education authorities established by the Act were elected under the Proportional system in April, 1919. The single transferable vote was used for the first time from one end of Scotland to the other, and the results, according to press reports, appear to have given complete satisfaction to everyone.

THE LOCAL ELECTIONS (PROPORTIONAL REPRESENTATION) BILL, 1920.

The Local Elections (Proportional Representation) Bill, 1920, enables local authorities in England, Scotland and Wales to adopt, by a three-fifths majority of Proportional Representation system of the election of aldermen, bailies, and councillors. The bill has passed the House of Lords after modifications suggested by the Government, and has been "starred" as a Government measure on reaching the House of Commons. It is, therefore, likely to become law at the next session.

TASMANIA.

In view of the fact that the single transferable vote system of Proportional Representation has been in force in Tasmania for many years, the Committee made a careful, detailed study of this system.

Tasmania is an island off the south coast of Australia. From north to south it is two hundred miles long, and from east to west two hundred and forty-five miles. The area of the main island is 24,331 square miles, but a number of adjoining islands included within the legislative jurisdiction brings the total area to 26,215 square miles. (The area of New Brunswick is 27,985 square miles.) Executive authority is vested in the Governor-General, who is appointed by the Crown, and he is assisted by a Cabinet of five Ministers responsible to the legislative body. This body is the Parliament, consisting of the Legislative Council (18 members, elected for six years) and the House of Assembly (30 members, elected for three years). There is universal adult suffrage.

Proportional Representation was introduced into Tasmania by the Electoral Act of 1896, in which a form of the single transferable vote was used for two of the electorates of the House of Assembly. The causes which led to the adoption of this system were thus stated by the late Mr. Justice Andrew Inglis Clark in a statement contributed by him to the report by a commission composed of Mr. J. G. Davies and R. M. Johnston on the elections for the Senate and the House of Representatives in Tasmania for 1901, this statement being as follows:

"The Clark-Hare system of voting was introduced into the Electoral Law of Tasmania in consequence of the frequent failure of the ordinary system of voting to secure a proportionate representation of the preponderating opinion of the electors on political questions either in single or plural electorates."

Under the first Electoral Act, which provided for the election of the members of a bicameral Legislature, the City of Hobart, by the "Block vote" elected five representatives to the House of Assembly as one electorate, and the City of Launceston elected three representatives to the same Branch of the Legislature in the same manner.

Under that system it was discovered that a majority of the electors, in each of the two electorates, could elect all the representatives, and leave a very large minority totally unrepresented in the Legislature. To remedy this evil those two electorates were divided into eight single electorates. But under this system it was discovered that when three or more candidates presented themselves for election, it very frequently happened that the successful candidate was elected by a minority of the total number of votes recorded. The same thing sometimes occurred in the rural electorates, which were all single electorates, but the number of candidates in the rural electorates did not often exceed two. It was also discovered that the division of the Cities of Hobart and Launceston into eight single electorates reduced the area of each electorate, and the number of votes to such small dimensions that the agents and canvassers of the several candidates could easily interview every resident elector and ascertain very closely the number of purchasable or otherwise controllable votes.

After the representation of the cities of Hobart and Launceston was increased into six and four members, those electorates were divided into five electorates, each of which returned two members. At the same time two rural electorates, each returning two members, were created. Under this plan it was discovered that the majority of electors in the total number of the electorates which returned two members, frequently secured much larger representation in Parliament than that to which it was proportionately entitled, and thereby gave a preponderance of voting power in the Legislature to a political party which had secured only a minority of the total number of votes recorded at a general election. In several instances neither of the successful candidates in a double electorate was elected by a majority vote. The last-mentioned result was frequently produced by a large number of the electors voting for only one candidate out of the five or six who were in the field.

With a view to avoiding these serious defects the cities of Hobart and Launceston were converted into two electorates under the Clark-Hare system, which enables every section of political opinion which can command the requisite quota of votes to secure a number of representatives proportionate to its numerical strength. It also utilizes every vote recorded if the elector chooses to exercise the whole of its power to indicate his preferences. If any vote is not used to help in the election of a representative it is because the voter has chosen to indicate his preference for a less number of candidates than the number of representatives to be elected in the electorate in which he votes.

The Electoral Bill of 1896 was brought in by Mr. Clark, then Attorney-General. The Bill applied the Single Transferable vote method to two electorates Hobart (6 members) and Launceston (4 members), leaving the rest of the country in single member electorates. The Electoral Act of 1896 contained a provision that it should remain in force until 31st December, 1897, but it was afterwards extended and it remained the electoral law of Tasmania until repealed by the Electoral Act of 1901. The system came under discussion again in 1899, when the Electoral Bill of that year was before the House of Assembly. Mr. Clark meanwhile had become a Justice of the Supreme Court of Tasmania and the Bill was brought in by Mr. D. C. Urquhart. It was proposed to apply the system to the whole of Tasmania, which was to be divided into seven districts returning from four to seven members each. The debate dealt mainly with the political effects and difficulties of the system. The supporters of the system urged it provided representation for minorities. The opponents of the system urged that it was not understood; that electors did not want it; and in particular that the country districts were against it, and that large districts were difficult to canvass. The Bill was withdrawn by the Government and the old Electoral Act of 1896 (in which, as previously mentioned, the system was used in Hobart and Launceston) was continued until 1901.

In 1901 Sir Elliott Lewis introduced a Bill in which the system was to be used for the whole of Tasmania. This was opposed on much the same grounds as in 1899 and the Government gave away and reverted to the Single Member System again.

The Electoral Law was again under consideration in 1906, when Mr. J. W. Evans brought in an Electoral Bill in which Tasmania was divided into five districts, each returning six members. This Bill was withdrawn and another similar Bill was introduced, which became law the following year and has remained the law to the present. Elections under it have been held in 1901, 1912, 1913, 1916 and 1919. The committee was furnished with the reports made on the last three elections to the Parliament of Tasmania by the Commission, and they are attached to this report as Schedules "A," "B" and "C." The five constituencies in Tasmania vary in size. The committee has been furnished with a map of Tasmania showing the five constituencies, which map is attached hereto as Exhibit "D." The number of electors in each district is as follows:—

Bass	22,377
Darwin	18,588
Denison	25,619
Franklin	22,525
Wilmot	18,432

In a letter to the chairman of the committee the Deputy Chief Electoral Officer for Tasmania writes as follows, with reference to the system in force:—

"Regarding the method generally, it may be said that it satisfactorily answers all requirements. Theoretically this system and that of Switzerland is perfect, and minor anomalies which occur in actual practice can hardly be said to outweigh even to a small extent, many of its advantages."

The results of the five elections held under this system show that in each election the number of seats actually obtained by the respective parties was almost mathematically exactly in proportion to the number of votes cast for the candidates of each party. It will be noticed from the figures of the number of voters in each of the districts that there is not in Tasmania a uniform quota, that is to say, that the number of votes requisite to elect a candidate are not the same in each district. Tasmania has adopted what is known as the district quota. There has been much discussion in Tasmania as to the advisability of adopting a uniform quota, but as yet this letter has not been adopted.

The committee has attached hereto the Tasmania Electoral Act of 1907 as Schedule "E," the Hare-Clark system of Election, Explanations and Illustrations as Schedule "F," copy of the regulations relating to Legislative Council and House of Assembly elections as Schedule "G," and instructions to returning officers for House of Assembly elections as Schedule "H."

OFFICIAL ACTION IN CANADA.

In Canada there has been some years a movement for the introduction of Proportional Representation to federal, provincial and municipal elections. In 1916 the Proportional Representation Society of Canada was formed to meet the growing demand for information on the subject. The membership of this society includes the names of many prominent parliamentarians of the various political parties, together with many representative public men. This society reports a greatly increased demand from all over Canada during the past year for lectures, pamphlets, and blank forms for the conduct of private elections.

The first definite action for Proportional Representation was taken in Ottawa in 1916, when the electors carried on a plebiscite in favour of Proportional Representation for municipal elections by 5,083 votes against 3,853. No immediate action resulted, but in July last the Ottawa City Council unanimously approved a resolution that the legislation necessary for its immediate application be sought.

In 1916 the Alberta Legislature made Proportional Representation optional for Alberta cities, and Calgary adopted the system in that year, and has since held their municipal elections under it.

In 1918 British Columbia passed similar legislation, and in several British Columbia cities, including Vancouver and Victoria, Proportional Representation has been adopted, and in some cases elections under it have already been held.

During the past year permissive legislation was passed in Saskatchewan and by-laws on the matter are to be submitted to the electors in Regina, Moose Jaw, Saskatoon, and North Battleford at the next municipal elections. At the same time the Saskatchewan Government appointed a commissioner to study Proportional Representation with a view to its adoption to the election of the Legislature. The report will be presented at the next session.

In Manitoba very considerable progress has been made during the present year. During the recent provinical elections the City of Winnipeg was grouped together as a ten-member constituency and the single transferable vote was used. The result was that four supporters of the Government, four Labour members and two Conservatives, were elected. Evidence with respect to the election, in the form of letters to the Proportional Representation Society of Canada, was submitted to your Committee. The Honourable Thomas N. Johnson, Attorney-General of Manitoba, wrote in part as follows:—

> I feel that I can truthfully say that I have not now and never have had a single regret for the efforts made by me personally in connection with the introduction of this reform into our election laws. The Proportional Representation system gives a more truly representative legislation than the system of single-member constituencies. Everything claimed for it in the literature which we used, and with which you are familiar, was clearly accomplished. The electors of Winnipeg had no more difficulties than usual, and the counting, notwithstanding the great number of candidates (41 in all), came off without a hitch of any kind.

Mr. F. J. Dixon, M.L.A., the leader of the Labour Party in Manitoba, wrote:

> The use of Proportional Representation at Winnipeg in the recent provincial election demonstrated the merit of the system in securing representation for the different parties in proportion to their numerical strength in the constituency.
>
> While it is probable that under the old system, with three-cornered contests, Labour would have secured more seats, the Labour party does not desire to increase its representation in legislative bodies by taking advantage of an antiquated system of election. It prefers to win by putting before the electors a programme to meet the needs of the time and candidates worthy of support.
>
> The Labour party, when numerically weak, advocated Proportional Representation. Now that it is gaining in strength it has no desire to recede from its former position.
>
> Winnipeg's experience certainly demonstrated the superiority of Proportional Representation with grouped constituencies over the single-member constituency plan.

Mr. W. J. Tupper, M.L.A., Conservative, wrote:—

> In my opinion the test that Proportional Representation underwent in this city during the late provincial election was successful.
>
> As I understand the system, it is intended to give representation to all parties in proportion to their numerical strength. The result of the late election showed that the minority parties in the city of Winnipeg received representation in accordance with

their voting strength. It, however, did not favour independent candidates as you will have observed.

I might say that the success of the system seems to me to depend upon the efficiency of those in control of the counting. We were fortunate in this province to have exceptionally able men in charge and the result is no doubt in a great measure due to them.

Mr. John T. Haig, M.L.A., Conservative, wrote in part as follows:—

I feel in talking to my supporters generally that they are entirely satisfied with the working of the system . . . . Taken as a whole, I believe the members elected truly represent the proportional vote of the community as it was at that time. . . . As you know we have had a difficult situation in Winnipeg since the strike last year, and anything that will give all the elements in the community a chance to voice their opinions in Parliament appears to me to be a good thing for the whole community. . . . . If we had had the old system in Winnipeg I doubt if a single Conservative would have been elected, and I have no doubt the Government would have had a larger representation in the House at the expense of the Conservative and Labour parties because they would have had the machinery of distributing the seats, and as Governments usually do, would have distributed them with an eye to the result being to their advantage. Under this system no such thing can happen.

The Manitoba *Free Press* wrote editorially on the election as follows:—

Winnipeg, it may be ventured, has put Proportional Representation upon the Canadian political map. The test the new system has successfully passed through in the recent Manitoba election is the last thing needed to demonstrate the practicability and merits of Proportional Representation. Its extension to the rural constituencies in Manitoba is assured, and its ultimate adoption for all elections—civic, provincial and federal, may now be looked on as inevitable. In Winnipeg the test was classic, and Proportional Representation came through with flying colours.

Some of the advantages of the new system are very apparent. In the first place Proportional Representation eliminated the excitement and bitterness from the election campaign; the knowledge that each party could only get its fair proportion, and no more, of the available seats made the old-time strategy and electioneering useless; it also saved thousands of dollars which would have been spent in pushing the individual candidates and it enabled the electors to approach the ballots with a calmness of mind which gave them an opportunity to cast their votes with the greatest possible understanding and intelligence; the trifling number of spoiled ballots is an eloquent testimonial to the fact that the electors were cool and clear-headed when they went to the polls.

The leading fact, however, is that the result of the ballot was worked out with mathematical exactitude to the desired end; the elected candidates represent in accurate proportion the voting strength of the parties in the city; no votes were lost and the voter who saw that his first choice had been defeated knew that his vote was not extinguished, but passed on to his alternative preference, and that in the final results he had secured his correct proportion of representation.

* * *

This successful workout of Proportional Representation in Winnipeg will have an influence in favour of the system throughout Canada. Winnipeg was also being closely watched in Great Britain and in other centres where the merits of this system of election are under consideration. A more difficult test apparently has never been applied, and the result has fully vindicated all the claims that Proportional Representation gives a true and just reflection of the total electorate in the personnel of the bodies elected under its rule.

Additional evidence as to the working of Proportional Representation in the Winnipeg elections was forthcoming in the report of Mr. A. S. Winchester, of the Department of the Attorney-General of Ontario, who was sent to Winnipeg to observe the process of counting the ballots, etc. Mr. Winchester's report is attached hereto as Schedule "I."

In March, 1920, the City Council of Winnipeg, in order to prevent an almost complete monopoly of either labour or non-labour representation on the City

Council at the next municipal elections, secured an amendment of the city charter, which enabled the city to use Proportional Representation. As a result the municipal elections in January next will be held under Proportional Representation.

The Montreal City Charter Commission has devoted several sessions to the study of Proportional Representation in connection with the proposed new city charter, and while no report has yet been presented it is extremely likely that it will contain a recommendation that Proportional Representation be adopted for future municipal elections in that city.

We understand that Proportional Representation has been endorsed by a number of Dominion and Provincial organizations, including the Trades and Labour Congress of Canada, the various Provincial Labour organizations, the G.W.V.A., both Dominion and Provincial, the Independent Labour parties of Manitoba, Ontario and British Columbia; the Canadian Council of Agriculture; the various Provincial Grain Growers' Associations; the Social Service Council of Manitoba. A number of these organizations have also, we understand, applied Proportional Representation to the election of their own officers.

A typical example of the resolutions endorsing Proportional Representation is the one adopted at the Dominion Convention of the G.W.V.A., held in Montreal in March, 1920, which was as follows:—

> Whereas, it has been shown that the system of Proportional Representation is the only fair way that the true feeling of an election can be established;
>
> And whereas, this has been fully demonstrated in other parts of the world;
>
> Therefore, be it resolved, that we, the Great War Veterans' Association in Dominion Convention assembled, thank the various Local and Provincial Commands for the great interest shown on this important question, and reaffirm the stand of the Vancouver Convention, 1919, i.e., that the G.W.V.A. recommends the principles of election under the system of Proportional Representation in all elections in the Dominion of Canada, and that this recommendation and affirmation be forwarded to the proper authorities through our Dominion Commands.

INTEREST IN ONTARIO.

At the Provincial Liberal convention, held at Toronto in June, 1919, the following resolution was carried:—

> That in the opinion of this convention the present system of election of representatives to our elective bodies is unrepresentative and undemocratic:
>
> Its defects are three-fold: (1) often a gross exaggeration of the strength of the victorious parties; (2) sometimes a complete disfranchisement of the minority; (3) at other times a failure of a majority of citizens to obtain their due share of representation.
>
> Therefore, be it resolved, that the Liberal party in the Province of Ontario, in convention assembled, favours the placing of a law upon the statute books providing that the election of members to the Legislature and municipal councils shall be by a form of preferential voting, which will result in Proportional Representation.

The United Farmers of Ontario on August 1, 1919, annunciated their policy, clause No. 10, of which reads:—

> "To apply the method of Proportional Representation to our electoral methods."

The platform of the Independent Labour Party of Ontario, which was published in the *Industrial Banner,* January 31, 1919, contained a Proportional Representation plank, as follows:—

> "Proportional Representation with grouped constituencies."

At the last convention of the Provincial command of the Great War Veterans' Association, the following resolution was carried:—

> Whereas, it has been shown that the system of Proportional Representation is the only fair way that the true feeling of an election can be established, and whereas this has been fully demonstrated in other parts of the world,
>
> Be it resolved, that we, the members of the G.W.V.A. in provincial convention assembled, endorse in full the principles of election under the system of Proportional Representation, and further that we recommend Proportional Representation for all elections in Canada, whether Federal, Provincial or Municipal.

The Ottawa Board of Trade on October 19, 1920, unanimously endorsed Proportional Representation and forwarded the following resolution to the chairman of this committee:—

> The Council of the Ottawa Board of Trade are in hearty accord with the system of Proportional Representation and wish you all success in your investigation of the subject.

In July last the Ottawa City Council, as previously mentioned, unanimously adopted a motion that permissive legislation be requested from the Provincial Government to apply Proportional Representation to the municipal elections of the city.

The Ontario Provincial Council of Carpenters at their recent annual convention used Proportional Representation for the election of its officers, and, according to the Peterboro' *Examiner,* June 28, 1920, "the delegates approved the Proportional Representation system of voting and recommended that it be adopted for all elections in Canada."

The Ottawa Trades and Labour Council has adopted resolutions approving Proportional Representation for all elections.

The Ottawa Teachers' Institute at its annual meeting on February 20 last, according to the Montreal *Gazette,* "unanimously endorsed the principle of Proportional Representation," and certain speakers "were warmly applauded when they addressed the teachers in its support." The teachers also decided to adopt Proportional Representation for future elections for their own officers.

Preportional Representation has been used for some years in Toronto for the election of the Allied Trades and Labour Council, and in Ottawa by the Civil Service organizations, numbering several thousands of members; by the Rotary Club; by St. Paul's Methodist Church for the election of managers; and by Local No. 80, American Federation of Musicians.

At a recent meeting of the Hamilton Chamber of Commerce to consider the subject of Proportional Representation it was "unanimously decided," according to the Hamilton *Spectator,* "to recommend the directors of the Chamber of Commerce to consider the advisability of choosing next year's officers by the system."

The syllabus of the extra-mural courses of Queen's University includes an essay on Proportional Representation.

The following are among those newspapers and periodicals in Ontario which, judging by their editorials, are definitely supporting Proportional Representation:

Brantford Expositor
Brockville Recorder and Times
Canadian Labour Press
Chatham Planet
Fort William Journal
Hamilton Herald
Hamilton Spectator
Hamilton Times
Industrial Banner, Toronto
Kingston Standard
Kingston Telegraph
Le Droit

Lindsay Post
London Advertiser
London Free Press
Ottawa Citizen
Queen's Quarterly
Social Welfare, Toronto
Toronto Globe
Toronto Star
Toronto World
Veteran
Woman's Century
Woodstock Sentinel-Review
Canadian Railroader

Among those newspapers who, while not definitely committing themselves editorially, have shown keen interest in the subject, are:—

Cobalt Nugget
Ingersoll Review
Kingston Whig
Kitchener Record
Pembroke Standard
Presbyterian and Westminster, Toronto,
July 22 and October 28, 1920.
Port Arthur News-Chronicle.
Sault Ste. Marie Star
Stratford Herald
St. Thomas Times-Journal
Windsor Star

Hydro-Electric Power Commission of Ontario

REPORT OF PROGRESS

ON

Queenston-Chippawa Power Development

January 31st to April 9th, 1921

BY

R. S. LEA
CONSULTING ENGINEER

Printed by CLARKSON W. JAMES, Printer to the King's Most Excellent Majesty
1921

Printed by
THE RYERSON PRESS

REPORT

—OF—

R. D. JOHNSON

—OF—

R. D. JOHNSON & P. WAHLMAN
Hydraulic Engineers
60 Wall Street
NEW YORK

—RE—

QUEENSTON-CHIPPAWA DEVELOPMENT

June 1920

MEMORANDUM
OF THE
PROBLEMS IN HYDRAULIC ENGINEERING
ENCOUNTERED BY THE
HYDRO-ELECTRIC POWER COMMISSION

Since the interest of the writer was first definitely enlisted in the proposed ideas and tentative plans looking toward a new water-power development near Queenston, so many difficult and interesting hydraulic problems have been encountered and solved, that it is thought worth while to rehearse them in outline, somewhat chronologically, as an index to the history of this branch of the engineering work, and possibly as a resumé for subsequent consultation with reference to similar undertakings.

The earlier considerations of the broad, comprehensive plan of development which eventually determined the location of the water intake and the power station with the intervening canal were fairly well crystallized, only, however, as to general outline, prior to the writer's direct interest in the enterprise, which began in April, 1915, and became officially recognized in September, 1916.

The Commission's engineers very evidently had in mind the adoption of a plan which would conform with the broad principles properly understood to be exemplified in a public undertaking, for the benefit of the people, and the ultimate conservation of water with respect to the power rendered available led to a more comprehensive layout than probably would have been attractive to private investors who usually prefer to skim the cream for present advantage and leave sour milk for posterity to subsist upon. Thus it was nothing short of the total available fall between Queenston and Chippawa was considered to be consistent with the above ideal. Having adopted this broad view of the matter, their next concern was to develop this complete fall in the most economical manner to secure the maximum of power for a minimum diversion of water out of its natural course so as not to mar the scenic beauty of Niagara Falls, and also to accomplish this result with the least expenditure of money consistent with economically durable construction. No effort has been spared to maintain the proper balances between far-seeing economy and immediate benefits, and the results so far attained indicate most able and competent management.

The consideration which led the engineers of the Commission to prefer a canal to a tunnel are probably more numerous than those which can be now called to mind, but some of them appeared later on, during a careful re-consideration of this question in which the writer largely participated. This careful overhauling and re-investigation was begun early in 1916 and was continued for more than a year, concluding with an endorsement by the engineers of their original choice of a canal.

The comparative merits of these two types of water conduits were weighed in every aspect, more thoroughly and carefully than is almost ever possible in connection with undertakings of less magnitude, and this generalization includes, probably, all other prior developments. It was found, amongst a multitude of other things, that it was not practically feasible to secure as low a value of head loss in a tunnel as could reasonably be obtained by means of a canal, although the over-all economy of the two methods was not clearly directed to either course of procedure when the value of the difference in head-loss was capitalized as lost power and added to the estimated cost of the tunnel. Nevertheless, it was recognized that, apart from any apparent balance in the comparative economies, power lost in friction is for ever gone and might reasonably prove, in the long run, to have a much higher value than at present foreseen; but the main consideration which seemed to favor a canal, at least in the opinion of the writer, was that, during these studies, the Commission found it possible to provide much more capacity in the canal than was at first contemplated, and as this enlargement of the canal cut could be made, for the most part, merely by deepening the channel without materially adding to the already enormous overburden of earth which had to be stripped from the rock, in any event, the relative merits of an open cut and tunnel began increasingly to favor the former; so that, although the writer himself initially favored a tunnel for a capacity of 6,000 to 10,000 sec. ft., yet he is not inclined to hold this position with the capacity materially increased as now contemplated. In other words, the choice based upon generalities is not so clearly pointed out as to make it independent of the quantity of water to be handled, and when this quantity is increased by merely deepening the rock cut, the advantage of a canal becomes more and more apparent; in this way it is possible to make certain that no criticism of the present choice of water-way can be substantiated on any engineering basis.

In the fall of 1916 the writer began a systematic study of the hydraulic characteristics of the canal. This was carried on intermittently until the summer of 1918, and meantime the studies were being continuously pursued by the Commission's engineers. Many novel and interesting methods of analysis were developed for which opportunity had not been found in connection with smaller undertakings.

The value of a horse-power gained by additional excavation was determined to be considerably greater than the average horse-power produced by the whole development, and an accurate method was worked out, by which the horse-power lost in the canal could be determined with a minimum of labor for different amounts of excavation and for all stages of the river.

The old-fashioned methods of trial and error which were in vogue to approximate the curve of the water surface in a long canal, were so cumbersome and tedious as almost, if not quite, to preclude the possibility of performing the innumerable calculations necessary to determine the economical amount of rock to remove for a stated capacity of discharge, or the economical capacity for a given selected layout of the channel.

The method adopted for the determination of these surface curves, as explained in detail in the writer's report of February 1, 1917, and more particularly in the report of July 30, 1918, is a direct one, not involving trial values, and is so rapidly accomplished that the complete transitory history of a series of surface curves was easily portrayed for a continuous alteration in some dimension of the canal cross-section.

By the use of graphical calculus it then became possible to determine, for an infinite number of different assumptions, the ratio of the cost of increasing the excavation an infinitesimal amount, to the corresponding infinitesimal amount of power gained thereby, and as this ratio represents the cost rate per horse-power at which additional power is being obtained by further excavation, and as this rate increases with the tentative size of the canal, it becomes quite easy to know, within certain limits, when it is time to stop enlarging the cuts to reduce the friction; that is, once the value of this conserved power is determined upon, as indicated in the writer's report of February 1st, 1917.

Perhaps the most surprising and least foreseen result of the water gradient studies was the effect upon the total loss of head produced by varying the slope of the bottom of the canal in such a way as to keep the excavation constant in amount; that is, to tilt the bottom line about its centre so as to vary the depth of the cut in opposite directions on either side of the centre of the rock section.

A multitude of studies of this nature showed, beyond question, that within rather wide limits the slope of the bottom had no material effect upon the total drop in the water surface, but affected only the shape of the profile of the surface, making it concave as viewed from above when the bottom was tipped up at the upper end and down at the lower, and convex for the opposite tilting, without materially altering the relative elevations of the water surface at the extremities. This, of course, within limits.

In one case a variation in the bottom slope of 3.5 feet in 10,000 had no appreciable effect upon the elevation of the water at the lower end of the canal.

Thus it was found possible to fix the slope of the rock bottom according to the best physical conditions for carrying out the work of excavation without particular refinement in its relation to the hydraulic features.

In a canal as long as this, the question of surges or discontinuous flow throughout the length of it, caused a good deal of concern until these phenomena were carefully studied. This was taken up in considerable detail by the writer in the summer of 1916, and has received much attention during the intervening period, up to the present time, by the Commission's engineers and himself, and it appears quite clear that enough information in this regard has been acquired so that safe operation will be provided in the Commission's plans.

An interesting fact in this connection is the prevalence of unsteady flow which will be the ordinary condition of operation; whereas, in a short canal, it is customary to assume that the same quantity of water is entering and discharging at the same time, this ideal state of affairs will almost never strictly obtain in the long Queenston-Chippawa canal, because the natural period of its surge vibration is so long that a wave once started will be sure to continue long enough to be accentuated or retarded many times by small changes of load before it would have time to die out of its own accord under the influence of friction; this is particularly true where the canal walls are smooth, as they will be when they are carefully lined with concrete as intended.

Therefore, it will be difficult to find an instant when the rate of flow which is being drawn in through the intake is precisely the same as that which is generating electricity at the power station; and the discrepancy, at times, will be very great.

One of the features of the canal layout which received especial consideration was the construction of the curves or bends at the points where the water suddenly changes its direction. A series of experiments conducted at the University of Toronto in the fall of 1918, following a report by the writer, decided the Commission's engineers to adopt a sharper bend than they had at first contemplated, but any elaborate preparation at these curves, such as guiding vanes or other artificial direction of the stream lines did not appear to be warranted in view of the slight discrepancies discernible in the different constructions tested.

Of all the problems in connection with the canal, perhaps the most troublesome is the avoidance or disposal of ice, and this question has received an amount of attention proportionate to its importance. The Commission's engineers have had this constantly in mind for the past five years, and the writer has been somewhat in touch with it for a like period; but more particularly in connection with his reports of July, 1918 and January, 1919.

The methods which have been adopted possess the double virtue of precluding the possibility of taking into the mouth of the canal any surface ice and also of effectually removing any which may form on the canal itself. The latter idea was presented to the writer by the Commission's engineers in the spring of 1918, and after undergoing some modification, was finally adopted. It consists of a horizontal diaphragm or skimmer embracing the whole width of the canal, the lip of it adjustable to the various water stages; this diaphragm skims off the top layer of ice-laden water and diverts it into a special discharge tunnel entirely separated from the canal itself.

The hydraulic proportions are carefully designed to provide an acceleration of the natural surface velocity as the water there comes into contact with the edge of the skimmer, so that the waste water and ice, on top of it, begin to move faster than the water below it, as soon as the separation is effected. Thus, ice approaching the edge has no tendency to be sucked down underneath the skimmer where the undisturbed, ice-free water continues on its way toward the power station.

As previously indicated, this skimmer is intended only to remove ice which may be formed on the surface of the canal itself, between the intake and the skimmer. Beyond the skimmer lies the Forebay, and any ice formed on its surface will be taken care of in an ordinary sluice at one end of the screen house.

The floes of river ice will be effectively excluded from the canal by means of a novel intake which permits a complete separation of the ice-laden water from that drawn into the mouth of the canal. The final design of this is the result of the co-operation of the Commission's engineers with the office of the writer in adapting an idea conceived by Mr. Wahlman in his South American experience.

The essential characteristic of this intake is the ability to draw the water evenly from the bottom of the river through continuous slots, into tubes arranged somewhat like the fingers of a hand, with the wrist representing the entrance to the canal.

Although the general conception is somewhat obvious and simple, it has never been used before in this country, to the writer's knowledge, partly, perhaps, because its apparent simplicity is very misleading. That is to say, it is far easier to conceive the water to be drawn into these fingers, evenly and in proportion to the water flowing in the river at all points, than it is to so proportion the hydraulic dimensions as actually to secure this ideal result. In fact, a completely new theory of the flow of water had to be evolved, developed and demonstrated by costly experimental determinations, before the Commission felt justified in preparing plans for the intake. This work covered a period of two years' time, or more, and received the attention of outside consulting advisors besides that of Mr. Wahlman and the writer, as well, of course, as the constant study of the Commission's engineers.

The services of a professor of hydraulics of the University of Toronto were engaged to lay out an exact miniature reproduction of the Niagara River at Hog Island. This was done with great attention to detail, in the Dufferin Island channel of the Niagara Falls Park, and the result was a very satisfactory working model of the river and the adjoining Chippawa Creek to a scale of one to twenty, with the water discharges in the ratio of one to the square root of twenty, of the actual river flow.

On this artificial "site" five different types of intake were successively constructed and their behaviour carefully noted by measuring all the important gradients, discharges and velocities. The ice conditions were reproduced by means of floating bottles properly weighted by the proportion of water contained in them and by blocks of wood of proper density.

The model constructed according to the plan submitted by Johnson & Wahlman proved to behave exactly as the accepted theories anticipated, and this idea was, accordingly, adopted by the Commission as the best one up to date.

The theory relating to the flow of water in this intake is set forth in the writer's report under date of March 1st, 1920, although the general outline was presented in a report dated January 31st, 1919.

Amongst the features which mark real progress on the hydraulic side of the water-power art, as will be demonstrated in the Queenston-Chippawa Development, may be mentioned the draft tubes, the Turbines themselves, the controlling Valves, the Sluice for trash removal in the screen-house, the Control Gate in the canal, etc. All of these features will represent the last word in their respective fields as determined by the close association of the Commission's engineers, not only with the engineers of all the most recent water-power developments in the United States and Canada, but also with the staffs of many of the most forward-looking manufacturers of hydraulic apparatus, some of whom regularly employ consulting engineers of high standing, and continually carry on experimental work to keep themselves abreast of the times.

The discharge or draft tubes leading from the turbines will be of the very largest type, and will be modelled according to the results of a long series of experiments conducted at Niagara Falls, N.Y., and at Philadelphia. They will have straight, vertical axes, avoiding the losses incidental to the ordinary bent tubes, and will certainly take their place in the vanguard of advancing attainment in this field of endeavour.

The turbines themselves will be unsurpassed in all particulars by any similar apparatus in the world, combining many novel features of safety and convenience of operation with the utmost conservation of the energy in the water which feeds them.

The valves which cut off the water when repairs to the turbines are necessary will be of the most approved "Johnson" type, now recognized to be indispensable where the utmost safety and convenience of operation are desired. They will be fitted with several important improvements which have not previously [illegible] in earlier installations.

The means for unwatering the rock section of the canal is unusual in the respect that no permanent obstruction to the flow is introduced in connection with the gate which shuts off the water. It has been found feasible and safe to provide one single gate, large enough to span the entire 18 feet width of channel, without resorting to a constriction of the water passage at that point, either by narrowing the channel or by inserting piers, as is often done to cut down the width of the gates. A single gate designed to sustain a water pressure of 1,200 tons is a bold conception, but a careful study has revealed no troublesome obstacles either in its construction or operation, and the wonder seems to be that larger gates for such purposes have not been more frequently adopted. The cost is very little, if any, greater than that of multiple gates, and the freedom from objectionable eddies which would otherwise trail along the water-way for a long distance beyond the point of obstruction, not only presents a much better appearance, but can be shown to have a real value in the saving of energy.

Although it is a fact that while oversights in engineering on a work of this magnitude would be correspondingly costly, yet the enormity itself, of the undertaking, has attracted the interested attention of a great number of able engineers, apart from the worthy staff of the Commission, and it may therefore safely be predicted that no advanced ideas in the water-power art will be overlooked, and no errors of serious or permanent consequence can be made without discovery in time to rectify them.

The Queenston-Chippawa Development, when completed, bids fair to furnish the best of material for the instruction and guidance of the students of hydraulic engineering, as a magnificent exposition of the art, and a display of the utmost proficiency of its period, in all particulars.

(Sgd.) R. D. JOHNSON.

REPORT

ON

CHIPPAWA HYDRO-ELECTRIC PROJECT

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

LETTER OF TRANSMITTAL

to

SIR ADAM BECK
Chairman

HUGH L. COOPER & CO.

Consulting Engineers

101 Park Avenue

New York City

August 7, 1920

New York, N.Y.,
August 7, 1920.

SIR ADAM BECK, Chairman,
Hydro-Electric Power Commission of Ontario,
Toronto, Ontario, Canada.

Sir:—

On April 22, 1920, your Commission gave us instructions calling for a general report from us on your Chippawa Hydro-Electric Power Project. Verbal instructions from you have emphasized the desire of the Commission that our examinations should be thorough and comprehensive and thus enable us to submit findings of a definite character. Our work since May 5th, 1920, has been continuous, with as many engineers and accountants as we believe necessary for the faithful discharge of the duty you have imposed.

We find the general plan of an open canal system as located on the plans submitted to us by your engineers, to be the best that could have been adopted when the history of your project is fully understood. The Project, as a whole, is the most ambitious hydro-electric undertaking yet devised by engineers on this continent or elsewhere.

We believe the expenditures which you will be required to make on this project will be justified by the beneficial results which will accrue to the industrial life of the Province of Ontario.

The report of our findings and recommendations will consist of the following digest and summary, and a complete supplementary report, which will follow later, giving details of all our investigations and reasons for our recommendations.

1. This project as originally planned called for the use of 6,500 c.f.s., and was later increased to 15,000 c.f.s. We are of the opinion that this quantity of water should be increased to 20,000 c.f.s. Owing to the type of water transmission adopted by your engineers, this increase in the use of water is possible without any appreciable loss of money for work thus far completed.

2. The question of the availability of 20,000 c.f.s. is of first importance. The United States Government engineers are about to recommend to the American Federal Congress that 80,000 c.f.s. be diverted from the Niagara River for power purposes; 40,000 c.f.s. by Canada, and 40,000 c.f.s. by the United States.

The inefficient use of water at Niagara Falls has become a serious problem. The American Government is requiring the abandonment of one inefficient plant on the American side. The Commission may ultimately decide that the best interest of the public will be served by an arrangement with the Canadian Niagara Power Company for the use by the Chippawa plant of the 8,225 c.f.s. which are now being inefficiently used by the Canadian Niagara Power Company.

The unused quantity of water under the present Treaty allotment amounts to 6.610 c.f.s. The balance needed to complete the recommended 20,000 c.f.s., namely, 1,165 c.f.s. could be taken from the Ontario Power Company.

3. The normal elevation of the water surface at the point of diversion from the Niagara River, as adopted by your engineers, is 560.50.

Owing to the imminence of considerable increased diversion from the Niagara River for power purposes above those now permissible, we are of the opinion that the elevation of the water surface at the point of diversion should be taken as El. 558.00. We find that with 15,000 c.f.s. in commission with normal tail water, the minimum operating head will be 292 feet, and with 20,000 c.f.s. this head will be 299 feet.

4. The term "Horsepower" as used in this report, will mean an electrical horsepower delivered to the high tension lines going out from the generator station.

In estimating the quantity of horsepower that will be produced by different plans discussed, we have used the following coefficients:

Kutter's formula has been used for all water transmission determinations where 0.04 has been applied for canal sections in earth, and .014 for concrete-lined canal sections. We have made a total deduction of 7½% of the quantity of water entering the intake, to be used for flushing purposes during the winter season and to compensate for probable wind losses. The general report will contain our reasons for the use of the foregoing coefficients.

5. We recommend certain changes in your present adopted plans, as follows:

6. INTAKE.—We believe the design of intake adopted by your engineers should be abandoned, and a fixed masonry boom substituted therefor. We find the plan adopted by your engineers will cost $3,359,093.80. The cost of the substitute fixed boom protection will be $581,640.00.

We are certain the intake proposed by your engineers would be a disappointment if built, for reasons which will appear in our general report. The saving resulting from this recommendation amounts to $2,777,453.80, entirely. The fixed boom arrangement proposed follows successful engineering precedents at the Toronto Power Company plant, and at Keokuk, Iowa, and other plants designed by us.

7. WELLAND RIVER SECTION.—We recommend that all of the Welland River Section, except that part near Station 244-00, be excavated with slopes 1 : 2, and the excavation be accomplished by the use of a suction dredge instead of the dipper dredge and cableway now being used.

8. CANAL SECTION.—We recommend that the canal section between stations 0-00 and 45-00 be excavated to slopes 1 : 2 by use of the suction dredge method. If recommendations in paragraphs 7 and 8 are adopted, we estimate the following savings will be effected:

9. SUCTION DREDGE SAVINGS.—On the Welland River Section, $635,000.00 for 15,000 c.f.s., and $1,051,000.00 if 20,000 c.f.s. are used.

For the canal section, the saving will be $1,108,000.00 for 15,000 c.f.s., and $1,560,000.00 for 20,000 c.f.s.

Our investigations show that the material referred to in paragraph 9 can be taken out by a suction dredge in 75% of the time required by the methods now planned. In addition to the foregoing the use of the suction dredge will release a considerable amount of your present equipment, thus further guaranteeing a sufficient amount of apparatus for the balance of your excavations.

The total saving due to the use of the suction dredge method will be $1,743,000.00 if 15,000 c.f.s. are developed, and $2,611,000.00 if 20,000 c.f.s. are developed.

10. BRIDGES.—We are of the opinion that material savings in the cost of uncompleted bridges can be made, but as this phase of the problem calls for considerable time for precise recommendations, no attempt at specific advice on this subject will be made here.

11. WHIRLPOOL SECTION.—In the whirlpool section we find your engineers have used the best care possible for this difficult portion of the work, but in view of the unusual conditions that exist in this section, we recommend that a test be made of the stability of the whirlpool section by filling it with water before any concrete lining is placed on the slopes.

12. SKIMMING WORKS.—We recommend that near Station 444-0 there be constructed a complete skimming works for the effective removal of floating frazil and snow accumulating between the intake and this station. The cost of this necessary facility we estimate to be $499,350.00.

13. FOREBAY.—We believe that the forebay as now designed for either 15,000 or 20,000 c.f.s. requires modifications if satisfactory operating conditions are to be secured.

We recommend the construction and the experimental use of a concrete or wooden model to scale 1 : 20, of the forebay, and a study of the flow data thus produced. This data will prove the necessity for changes in the forebay design, and be a safe guide for the adoption of the most economical plans for this need.

In our estimate we have allowed $225,000 for this test, and for the resulting necessary alterations in the design of the forebay.

14. SCREEN HOUSE.—The general designs of screen house and penstock intakes are satisfactory. We will, however, recommend changes in the detail of the design in our general report.

15. PENSTOCKS.—The general design of the penstocks is satisfactory. The question of expansion joints and other details will be referred to in the general report.

16. POWER HOUSE FOUNDATIONS.—During the period of our investigations we caused fifteen holes to be bored on the power house site. These disclosed the location and character of the rock which will serve as foundation for the power house. The foundation rock available is a red shale of acceptable quality for bearing purposes. These foundations, however, will be exposed to additional indeterminate and excessive lateral pressures from ice jams that occur in the river at and near the power house site.

We recommend that further borings be made in the river adjacent to the power house site, for the purpose of conclusively ascertaining the extent of the rock slopes. If further explorations show that the present power house location is in any danger from overhanging or insufficient slopes the present location should be moved back from the river to such a position as good judgment dictates.

We have included in our estimate $250,000.00 to cover the contingency of a possible change from the present location.

17. TURBINES.—The hydraulic machinery under contract with Wm. Cramp and Sons is approved. Your contract requirements with the Wellman-Seaver-Morgan Company, while satisfactory as far as the guarantees are concerned, require special care with respect to a most thorough inspection of all of the work called for by this contract.

18. VALVES.—The contract for the Johnson valves is in the main satisfactory, but special care should be devoted to inspection of details of design and shop work.

19. ELECTRICAL APPARATUS.—The design of the electrical apparatus has not been studied. The statements of your engineers with respect to the same have been accepted as satisfactory.

20. POWER HOUSE SUBSTRUCTURE AND SUPERSTRUCTURE.—The general design of the power house indicates a stable structure, but no examination of the details has been possible for want of time. It seems to us that considerable savings can be effected by a re-design of the power house substructure.

No design of superstructure has been submitted, but we have estimated that a satisfactory design of superstructure can be provided at a cost not exceeding 40 cents per cubic foot, excluding cranes.

21. ORGANIZATION.—We are of the opinion that all the engineering and business management connected with the design and construction of this plant with complete authority over every detail therein, should be located at Niagara Falls, Ontario, on the works.

We believe that the accounting system, as now installed, is too intricate, and that it should be greatly simplified and thus made to be of the maximum assistance to the Construction Department. We recommend that all accounts be audited by independent, certified public accountants every three months during the construction period. Our estimates of cost have necessarily been based, as far as tools and equipment are concerned, on figures supplied by your Accounting Department.

We recommend that a complete inventory be made at once of all tools, machinery and materials that have been bought for this work, and that this inventory be checked every ninety days, in the future, for the guidance of the Engineering and Accounting Departments.

We recommend that your Engineering and Construction Departments immediately prepare a work-time-schedule, setting forth specifically the monthly expected construction progress that is required for the final promised completion ready for commercial operation date.

Upon the adoption of such a schedule the same should be filed with the Commission, and the Construction Department should thereafter make a monthly report to the Commission setting forth clearly the relationship between actual achievement and the submitted scheduled forecast, for, in no other way can the Construction Management be held accountable.

We recommend that the Construction Department organize, maintain and test at least every ten days, an adequate system of fire protection wherever fire could interfere with construction progress, and that special vigilance be displayed in and about rock crushing and concrete mixing plants.

22. LABOR.—Special recommendations with reference to the handling of labor will be submitted in the general report.

23. COST.—The following paragraphs contain the discussion of the final costs and dates of completion for commercial operation, and the details for each case will be set forth in the final report.

Our examination of the accounts indicates a total expenditure of $19,936,370.86 up to May 1st, 1920, to which should be added $504,000.00 accrued interest from October 31st, 1919 to May 1st, 1920, making a total cost of the work to May 1st, 1920, of $20,440,000.00.

Case I.—If the work is completed according to your present plans using 15,000 c.f.s., we estimate the cost will be as follows:

(A)	Amount of H.P.	258,000
	Number of Units	5
	Total Cost	$66,423,418 00
	Cost per H.P.	$ 257 45
	Time of Completion	January 1, 1923
(B)	Amount of H.P.	389,000
	Number of Units	9
	Total Cost	$76,636,931 00
	Cost per H.P.	$ 197 00

Case II.—If 15,000 c.f.s. are used, and the recommendations in paragraphs 6 to 23 inclusive, are adopted, we estimate the cost will be as follows:

(A)	Amount of H.P.	258,000
	Number of Units	5
	Total Cost	$60,862,892 00
	Cost per H.P.	$ 235 90
	Time of Completion	January 1, 1923
(B)	Amount of H.P.	389,000
	Number of Units	9
	Total Cost	$72,216,635 00
	Cost per H.P.	$ 185 65

24. Available Water.—We are not advised as to how the Commission will procure the above 15,000 c.f.s. and the above costs per horsepower assume that the necessary 15,000 c.f.s. are obtained without expense.

We have suggested in paragraph 2, the acquisition of the Canadian Niagara Power Company by the Commission. Should this be accomplished, the necessary 15,000 c.f.s. would be available.

The arrangement we have in mind would provide for the furnishing to the Canadian Niagara Power Company of the amount of dependable power they now receive from the use of this 8,225 c.f.s., less an amount of power that equals the existing costs of operation and shutdowns due to ice.

The Canadian Niagara Power Company plant was unfortunately designed in the beginning as was generally believed at the time the plan was adopted, and has been continuously proven throughout its operating existence to date, and this fact should be taken actively into consideration when the amount of positive dependable power the Canadian Niagara Power Company would receive is being determined. Each winter season of its operation it has suffered marked interruption from ice trouble, and recently these interruptions have been as high as 40% of the total capacity.

If the foregoing arrangement is effected, the units in the Canadian Niagara Power Company plant thus made idle could be kept in reserve for future emergency use.

If the additional 8,225 c.f.s. are obtained as recommended above, and the compensation therefor is effected as suggested, then the amount of power mentioned in Cases I and II should be reduced by 80,000 H.P., thus producing costs per H.P. as follows:

CASE I—

For 9 Units ....$248 per H.P.

CASE II—

For 9 Units ....$233.71 per H.P.

25. CASE III.—If 20,000 c.f.s. are used and the recommendations mentinoed in paragraphs 6 to 23 inclusive, are adopted, we estimate the cost to be as follows:

(A) Amount of H.P. 311,000
Number of Units 6
Total Cost $71,988,626.00
Cost per H.P. 231.47
Time of Completion ....January 1, 1923

(B) Amount of H.P. 549,900
Number of Units 12
Total Cost $88,930,506.00
Cost per H.P. $162 00

If 20,000 c.f.s. are obtained in the manner recommended in paragraph 2, and the power compensated for as suggested in paragraph 24, then the total available power in Case III (B) will be reduced by that amount, or as follows:

(B) 549,000 H.P. minus 80,000 H.P. equals 469,000 H.P. Therefore, the unit cost becomes:

(B) 469,000 H.P. @....................................$189.61 per H.P.

26. The foregoing figures show by way of justification of enlargement of the plant to 20,000 c.f.s., that you will secure 469,000 H.P. at a cost of $58.39 per H.P. less than by using 15,000 c.f.s. It will be observed that this great saving is accomplished by a full compensation to existing interests at Niagara Falls, and at the same time there is yielded for the benefit of the Ontario consumers their much needed power supply at a cost not to exceed 30% of the cost by steam, even if steam were available.

27. In conclusion we wish to extend to your entire organization our appreciation of the aid they have given us in the work preceding this report. Investigations and reports of this character are always an annoyance to any organization. Mr. Acres and all his men have provided our needs in a spirit of co-operation that was as unusual as it was welcome.

Yours very truly,

(Sgd.) HUGH L. COOPER & CO.

REPORT

ON

CHIPPAWA HYDRO-ELECTRIC PROJECT

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

COST ESTIMATES

HUGH L. COOPER & CO.
Consulting Engineers
101 Park Avenue
New York City

August 7th, 1920

EXPLANATORY.

This report covers six different cost estimates, each of which is to be identified by its special serial number.

Case I.—Estimate of cost of Project as designed by the Hydro-Electric Power Commission Engineers wherein Hugh L. Cooper & Company's quantities and unit prices have been applied.

QUANTITY OF WATER, 15,000 c. f. s.

Case II.—Estimate of cost of Project wherein Hugh L. Cooper & Company have introduced modifications in design, and applied their quantities and unit prices.

QUANTITY OF WATER, 15,000 c. f. s.

Case III.—Same as Case II using 20,000 c.f.s.

The letter "C" indicates the cost to complete to January 1, 1923. This date applies to 5 and 6 units only.

The numbers 5, 6, 9, and 12 indicate the number of units.

CONTINGENCIES.

Contingencies in this estimate are treated as follows:

Ten per cent. is added to the neat-line excavation quantities in earth for overcut.

Seven and one-half per cent. is added to all other quantities to provide for changes in design and contingencies.

The unit price applied to steel in the penstocks is $225.00 per ton. The tonnage includes an excess of 10% for the first 100 feet in elevation drop beginning at the forebay and 15% allowance for the remainder. These percentages are exclusive of the 7½% mentioned above.

Niagara Development

Hydro-Electric Power Commission of Ontario

Estimate I-C-5

(A) INTAKE

COFFERDAM				
Steel Sheet Piling	2,902½	tons @	$125 00	$ 362,812 50
Fill	188,125	c. y. @	1.20	225,750 00
Pumping				50,000 00
EXCAVATION				
Earth Excavation	380,550	c. y. @	.65	247,357 50
Rock Excavation	21,500	c. y. @	3.50	75,250 00
MASONRY				
Concrete, plain	50,525	c. y. @	15.00	757,875 00
Concrete, reinforced	34,400	c. y. @	40.00	1,376,000 00
STRUCTURAL STEEL				
Gate Beams	223,063	lbs. @	.10	22,306 30
MISCELLANEOUS				
C. I. Spacers	118,250	lbs. @	.15	17,737 50
Gantry Crane				15,000 00
2 Lock Gates & Oper. Mach.				100,000 00
Fill, earth	169,850	c. y. @	.60	101,910 00
Rip Rap	7,095	c. y. @	1.00	7,095 00
Total				$3,359,093 80

(B) WELLAND RIVER

Earth Excavation	2,541,073	c. y. @	$ .70	$1,778,751 10
Rip Rap	26,875	c. y. @	1.00	26,875 00
Concrete	1,613	c. y. @	16.00	25,808 00
Total				1,831,434 10

(C) POWER CANAL

CANAL EARTH SECTION

Earth Excavation	2,441,201	c. y. @	$ 1.10	$ 2,685,321 10
Rock	77,726	c. y. @	3.50	[illegible]
Rock Lining	465,690	c. y. @	.15	69,853 50
Concrete	29,563	c. y. @	14.00	413,882 00
Total				$ 3,441,097 60

CONTROL WORKS

Rock Excavation	430	c. y. @	5.50	2,365 00
Concrete, reinforced	1,828	c. y. @	40.00	73,120 00
Gate, with Rollers Steel	240,800	lbs. @	.10	24,080 00
Gate Operating Machinery	107,500	lbs. @	.40	43,000 00
Bridge over Canal				25,000 00
Total				167,565 00

CANAL ROCK SECTION

Earth Excavation	3,011,036	c. y. @	1.10	3,312,139 60
Rock Excavation	2,939,365	c. y. @	3.50	10,287,777 50
Rock Fill	1,149,498	c. y. @	.15	172,424 70
Concrete in Walls	50,525	c. y. @	14.00	707,350 00
Concrete in Lining	285,090	c. y. @	14.00	3,991,260 00
Whirlpool	49,772	c. y. @	14.00	696,808 00
Anchor Rods, Steel	681,550	lbs. @	.20	136,310 00
Total				$19,304,069 80
Canal Earth Section				$ 3,441,097 60
Control Works				167,565 00
Canal Rock Section				19,304,069 80
Total Canal				$22,912,732 40

(D) FOREBAY

Earth Excavation				completed
Rock Excavation				completed
Concrete Lining	23,220	c. y. @	$14.00	$325,080 00
Concrete Walls	3,978	c. y. @	14.00	55,692 00
Anchor Rods, Steel	23,650	lbs. @	.20	4,730 00
Total				$385,502 00

(E) SCREEN HOUSE

SUBSTRUCTURE

Earth Excavation				completed
Rock Excavation				completed
Concrete, reinforced	26,810	c. y. @	$40.00	$1,072,400 00
Structural Steel in Racks	323,575	lbs. @	.075	24,268 13
Structural Steel in Gates	1,088,233	lbs. @	.075	81,617 48
Structural Steel in Checks	437,525	lbs. @	.10	43,752 50
Ice Chute Gate and Rig				25,000 00
Rock Fill	5,483	c. y. @	1.50	8,224 50
Earth Fill	5,052	c. y. @	3.00	15,156 00
Superstructure				237,405 00
Miscellaneous				75,000 00
				$1,582,823 61

(F) PENSTOCKS.

Tunnel Rock Excavation	6,450	c. y. @	$10.00	$ 64,500 00
Open Cut Rock Excavation	25,263	c. y. @	3.50	88,420 50
Concrete, plain	15,588	c. y. @	16.00	249,408 00

Concrete, reinforced	2,795	c. y. @	$40.00	111,800 00
Structural Steel	5,535,712	lbs. @	0.1125	622,767 60
Rip Rap, Wall	12,363	c. y. @	3.00	37,089 00
Total				$1,173,985 10

(G) POWER HOUSE.

COFFERDAM				
Concrete, plain	4,085	c. y. @	15.00	$ 61,275 00
Pumping				15,000 00
Removal Charges				45,956 00
SUBSTRUCTURE				
Rock Excavation	298,689	c. y. @	3.50	1,045,411 50
Concrete, reinforced	59,125	c. y. @	32.00	1,892,000 00
Tail Race Excavation	13,975	c. y. @	5.50	76,862 50
Superstructure				1,579,500 00
Miscellaneous				200,000 00
Emergency Fund				200,000 00
Total				$5,116,005 00

(H) HYDRAULIC EQUIPMENT.

Complete F. O. B. Queenston				$1,829,840 94
Storage, Transportation, erection	3,000	tons @	$60.00	180,000 00
Total				$2,009,840 94

(I) ELECTRICAL EQUIPMENT.

Complete in Place	$4,752,160 00

(J) RIGHT OF WAY.

Acquired

(K) BRIDGES.

$1,534,023 82

SUMMARY

(A)	INTAKE	$ 3,359,093 80
(B)	WELLAND RIVER	1,831,434 10
(C)	POWER CANAL	22,912,732 40
(D)	FOREBAY	385,502 00
(E)	SCREEN HOUSE	1,582,823 61
(F)	PENSTOCKS	1,173,985 10
(G)	POWER HOUSE	5,116,005 00
(H)	HYDRAULIC EQUIPMENT	2,009,840 94
(I)	ELECTRICAL EQUIPMENT	4,752,160 00
(J)	RIGHT OF WAY	Completed
(K)	BRIDGES	1,534,023 82
	Total	$44,657,600 77
	ENGINEERING AND OVERHEAD 8 per cent	3,572,608 06
	Total	$48,230,208 83
	INTEREST CHARGES Interest at 6½% per annum compounded semi-annually	4,193,209 55
	Total	$52,423,418 38
	TOTAL DISBURSEMENTS To May 1st, 1920, plus interest compounded annually to January 1st, 1923	14,000,000 00
	GRAND TOTAL	$66,423,418 38

(Signed) HUGH L. COOPER & CO.

Niagara Development

Hydro-Electric Power Commission of Ontario

Estimate I-C-9

(A) INTAKE

COFFERDAM.				
Steel Sheet Piling	2,902½	tons @	$125.00	$ 362,812 50
Fill	188,125	c. y. @	1.20	225,750 00
Pumping				50,000 00
EXCAVATION				
Earth Excavation	380,550	c. y. @	.65	247,357 50
Rock Excavation	21,500	c. y. @	3.50	75,250 00
MASONRY				
Concrete, plain	50,525	c. y. @	15.00	757,875 00
Concrete, reinforced	34,400	c. y. @	40.00	1,376,000 00
STRUCTURAL STEEL				
Gate Beams	223,063	lbs. @	.10	22,306 30
MISCELLANEOUS				
C. I. Spacers	118,250	lbs. @	.15	17,737 50
Gantry Crane				15,000 00
2 Lock Gates and Operating Machine				100,000 00
Fill, Earth	169,850	c. y. @	.60	101,910 00
Rip Rap	7,095	c. y. @	1.00	7,095 00
Total				3,359,093 80

(B) WELLAND RIVER

Earth Excavation	2,541,073	c. y. @	.70	$1,778,751 10
Rip Rap	26,875	c. y. @	1.00	26,875 00
Concrete	1,613	c. y. @	16.00	25,808 00
Total				$1,831,434 10

(C) POWER CANAL

CANAL EARTH SECTION				
Earth Excavation	2,441,201	c. y. @	$1.10	2,685,321 10
Rock Excavation	77,726	c. y. @	3.50	272,041 00
Rock Lining	465,690	c. y. @	.15	69,853 50
Concrete Walls	29,563	c. y. @	14.00	413,882 00
Total				3,441,097 60
CONTROL WORKS				
Rock Excavation	430	c. y. @	5.50	2,365 00
Concrete, reinforced	1,828	c. y. @	40.00	73,120 00
Gate with Rollers, Steel	240,800	lbs. @	.10	24,080 00
Gate Operating Machinery	107,500	lbs. @	.40	43,000 00
Bridge over Canal				25,000 00
Total				167,565 00
CANAL ROCK SECTION				
Earth Excavation	3,011,036	c. y. @	1.10	3,312,139 60
Rock Excavation	2,939,365	c. y. @	3.50	10,287,777 50
Rock Fill	1,149,498	c. y. @	.15	172,424 70
Concrete in Walls	50,525	c. y. @	14.00	707,350 00
Concrete in Lining	285,090	c. y. @	14.00	3,991,260 00
Concrete in Whirlpool	49,772	c. y. @	14.00	696,808 00
Anchor Rods, Steel	681,550	lbs. @	.20	136,310 00
Total				19,304,069 80
Canal Earth Section				3,441,097 60
Control Works				167,565 00
Canal Rock Section				19,304,069 80
Total Canal				$22,912,732 40

(D) FOREBAY

Earth Excavation	Completed			
Rock Excavation	Completed			
Concrete Lining	23,220	c. y.	@ $14.00	$325,080 00
Concrete Walls	3,978	c. y.	@ 14.00	55,692 00
Anchor Rods, Steel	23,650	lbs.	@ .20	4,730 00
Total				$385,502 00

(E) SCREEN HOUSE

SUBSTRUCTURE				
Earth Excavation	Completed			
Rock Excavation	Completed			
Concrete, reinforced	26,810	c. y.	@ $40.00	$1,072,400 00
Structural Steel in Racks	323,575	lbs.	@ .075	24,268 13
Structural Steel in Gates	1,088,233	lbs.	@ .075	81,617 48
Structural Steel in Checks	437,525	lbs.	@ .10	43,752 50
Ice Chute and Rig				25,000 00
Rock Fill	5,483	c. y.	@ 1.50	8,224 50
Earth Fill	5,052	c. y.	@ 3.00	15,156 00
Superstructure				406,980 00
Miscellaneous				100,000 00
				$1,777,398 61

(F) PENSTOCKS

Tunnel Rock Excavation	11,126	c. y.	@ $10.00	$ 111,260 00
Open Cut Rock Excavation	35,475	c. y.	@ 3.50	124,162 50
Concrete, plain	26,875	c. y.	@ 16.00	430,000 00
Concrete, reinforced	2,795	c. y.	@ 40.00	111,800 00
Structural Steel	9,226,187	lbs.	@ .1125	1,037,946 04
Rip Rap Wall	19,135	c. y.	@ 3.00	57,405 00
				$1,872,573 54

(G) POWER HOUSE

COFFERDAM				
Concrete, plain	6,880	c. y.	@ $15.00	$ 103,200 00
Pumping				25,000 00
Removal Charges				77,400 00
SUBSTRUCTURE				
Rock Excavation	375,014	c. y.	@ 3.50	1,312,549 00
Concrete, reinforced	99,975	c. y.	@ 32.00	3,199,200 00
Tail Race Excavation	23,650	c. y.	@ 5.50	130,075 00
Superstructure				2,673,000 00
Miscellaneous				250,000 00
Emergency Fund				250,000 00
Total				$8,020,424 00

(H) HYDRAULIC EQUIPMENT

Complete F.O.B. Queenston				$3,233,000 94
Storage, Transportation, Erection	5,400	tons	@ $60.00	324,000 00
Total				$3,557,000 94

(I) ELECTRICAL EQUIPMENT

Complete in Place	$8,417,360.00

(J) RIGHT OF WAY

Acquired

(K) BRIDGES

$1, 534,023 82

SUMMARY

(A)	INTAKE	$ 3,359,093 80
(B)	WELLAND RIVER	1,831,434 10
(C)	POWER CANAL	22,912,732 40
(D)	FOREBAY	385,502 00
(E)	SCREEN HOUSE	1,777,398 61
(F)	PENSTOCKS	1,872,573 54
(G)	POWER HOUSE	8,020,424 00
(H)	HYDRAULIC EQUIPMENT	3,557,000 94
(I)	ELECTRICAL EQUIPMENT	8,417,360 00
(J)	RIGHT OF WAY	Completed
(K)	BRIDGES	1,534,023 82
	Total	$53,667,543 21
	ENGINEERING AND OVERHEAD 8 per cent	4,293,403 45
	Total	$57,960,946 66
	INTEREST CHARGES	
	Interest at 6½% per annum compounded semi-annually	4,675,984 34
	Total	$62,636,931 00
	TOTAL DISBURSEMENTS	
	To May 1st, 1920, plus interest compounded annually to January 1st, 1923.	14,000,000 00
	GRAND TOTAL	$76,626,931 00

(Signed) HUGH L. COOPER & CO.

Niagara Development

Hydro-Electric Power Commission of Ontario

Estimate II-C-5

(A) INTAKE

Excavation				
Earth for Piers	18,275	c. y. @	$ .65	$ 11,878 75
Dredging	80,625	c. y. @	.45	36,281 25
Piers				
First Cost of Caissons				40,000 00
Installation of Caissons		each	$3,000.00	111,000 00
Concrete, plain	7,955	c. y. @	15.00	119,325 00
Grillage	215	M FBM	120.00	25,800 00
Booms				
Concrete, reinforced	5,237	c. y. @	40.00	209,480 00
Pontoons				
Structural Steel	268,750	lbs. @	.10	26,875 00
Painting				1,600 00
Total				$581,640 00

(B) WELLAND RIVER

Earth Excavation	1,373,601	c. y. @	$ .45	$ 618,120 45
Rip Rap	26,875	c. y. @	1.00	26,875 00
Total				$ 644,995 45

(C) POWER CANAL

CANAL EARTH SECTION				
Earth Excavation				
Suction Dredge	1,034,979	c. y. @	$ .45	$ 465,740 55
Dipper	330,000	c. y. @	.80	264,000 00
Steam Shovel	696,523	c. y. @	1.10	766,175 30
Rock Excavation	79,016	c. y. @	3.50	276,556 00
Rock Lining	24,940	c. y. @	.15	3,741 00
Concrete	29,563	c. y. @	14.00	413,882 00
Total				$ 2,190,094 85
CONTROL WORKS				
Rock Excavation	430	c. y. @	5.50	2,365 00
Concrete, Reinforced	1,828	c. y. @	40.00	73,120 00
Gate with Rollers, Steel	240,800	lbs. @	.10	24,080 00
Gate Operating Machinery	107,500	lbs. @	.40	43,000 00
Bridge over Canal				25,000 00
Total				167,565 00
CANAL ROCK SECTION				
Earth Excavation	3,011,036	c. y. @	1.10	3,312,139 60
Rock Excavation	2,939,365	c. y. @	3.50	10,287,777 50
Rock Fill	1,149,498	c. y. @	.15	172,424 70
Concrete in Walls	50,525	c. y. @	14.00	707,350 00
Concrete in Lining	285,090	c. y. @	14.00	3,991,260 00
Concrete in Whirlpool	54,610	c. y. @	14.00	764,540 00
Anchor Rods, Steel	681,550	lbs. @	.20	136,310 00
Total				$19,371,801 80
ICE CHUTE				
Open Cut Rock Excavation	64,500	c. y. @	5.50	354,750 00
Concrete, plain	1,290	c. y. @	20.00	25,800 00
Concrete, reinforced	1,720	c. y. @	40.00	68,800 00
Gates and Rigs				50,000 00
Total				$ 499,350 00
TESTING OF WHIRLPOOL SECTION				
Concrete, plain	630	c. y. @	20.00	12,600 00
Earth Fill	21,500	c. y. @	.60	12,900 00
Pumping				10,000 00
Total				$ 35,500 00
Canal Earth Section				$2,190,094 85
Control Works				167,565 00
Canal Rock Section				19,371,801 80
Ice Chute				499,350 00
Testing of Whirlpool Section				35,500 00
Total Canal				$ 22,264,311 65

(D) FOREBAY

Earth Excavation			completed	
Rock Excavation			completed	
Concrete Lining	23,220	c. y. @	$14.00	$ 325,080 00
Concrete Walls	3,978	c. y. @	14.00	55,692 00
Anchor Rods, Steel	23,650	lbs @	.20	4,730 00
Alterations in Design				225,000 00
Total				$ 610,502 00

(E) SCREEN HOUSE

SUBSTRUCTURE				
Earth Excavation			completed	
Rock Excavation			completed	
Concrete, reinforced	26,810	c. y. @	$40.00	$ 1,072,400 00
Structural Steel in Racks	323,575	lbs. @	.075	24,268 13
Structural Steel in Gates	1,088,233	lbs. @	.075	81,617 48

Cast Iron Gate Seats				10,000 00
Ice Chute Gate and Rig				25,000 00
Rock Fill	5,483	c. y. @	1.50	8,224 50
Earth Fill	5,052	c. y. @	3.00	15,156 00
Superstructure				237,405 00
Miscellaneous				75,000 00
Total				$1,549,071 11

(F) PENSTOCKS

Tunnel Rock Excavation	6,450	c. y. @	$10.00	$ 64,500 00
Open Cut Rock Excavation	25,263	c. y. @	3.50	88,420 50
Concrete, plain	15,588	c. y. @	16.00	249,408 00
Concrete, reinforced	2,795	c. y. @	40.00	111,800 00
Structural Steel	5,535,712	lbs. @	.1125	622,767 60
Rip Rap Wall	12,363	c. y. @	3.00	37,089 00
Total				$1,173,985 10

(G) POWER HOUSE

COFFERDAM				
Concrete, plain	4,085	c. y. @	$15.00	$ 61,275 00
Pumping				15,000 00
Removal Charges				45,956 00
SUBSTRUCTURE				
Rock Excavation	298,689	c. y. @	3.50	1,045,411 50
Concrete, reinforced	59,125	c. y. @	32.00	1,892,000 00
Tail Race Excavation	13,975	c. y. @	5.00	76,862 50
Superstructure				1,579,500 00
Miscellaneous				200,000 00
Emergency Fund				200,000 00
Total				$5,116,005 00

(H) HYDRAULIC EQUIPMENT.

Complete, F.O.B. Queenston				$ 1,829,840 94
Storage, Transportation, Erection	3,000	tons @	$60.00	180,000 00
Total				$2,009,840 94

(I) ELECTRICAL EQUIPMENT.

Complete in Place	$ 4,752,160 00

(J) RIGHT OF WAY.

Acquired

(K) BRIDGES

$1,534,023 82

SUMMARY.

(A) INTAKE	$ 581,640 00
(B) WELLAND RIVER	644,995 45
(C) POWER CANAL	22,264,311 65
(D) FOREBAY	610,502 00
(E) SCREEN HOUSE	1,549,071 11
(F) PENSTOCKS	1,173,985 10
(G) POWER HOUSE	5,116,005 00
(H) HYDRAULIC EQUIPMENT	2,009,840 94
(1) ELECTRICAL EQUIPMENT	4,752,160 00
(J) RIGHT OF WAY	Completed
(K) BRIDGES	1,534,023 82
Total	$40,236,535 07
ENGINEERING AND OVERHEAD 8 per cent.	3,218,922 81
Total	$43,455,457 88

INTEREST CHARGES	
Interest at 6½% per annum compounded semi-annually	3,407,434 24
Total	$46,862,892 12
TOTAL DISBURSEMENTS	
To May 1st, 1920, plus interest compounded annually to January 1st, 1923	14,000,000 00
GRAND TOTAL	$60,862,892 12

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Niagara Development

Hydro-Electric Power Commission of Ontario

Estimate II-C-9

(A) INTAKE

EXCAVATION				
Earth for Piers	18,275	c. y. @	$ .65	$ 11,878 75
Dredging	80.625	c. y. @	.45	36,281 25
PIERS				
First Cost of Caissons				40,000 00
Installation of Caissons		each	3,000.00	111,000 00
Concrete, plain,	7,955	c. y. @	15.00	119,325 00
Grillage	215	M FBM @	120.00	25,800 00
BOOMS				
Concrete, reinforced	5,237	c. y. @	40.00	209,480 00
PONTOONS				
Structural Steel	268,750	lbs. @	.10	26,875 00
Painting	......	....		1,000 00
Total				$ 581,640 00

(B) WELLAND RIVER

Earth Excavation	2,541,073	c. y. @	$ .45	1,143,482 85
Rip Rap	26,875	c. y. @	1.00	26,875 00
Total				$1,170,357 85

(C) POWER CANAL

CANAL EARTH SECTION				
Earth Excavation				
Suction Dredge	1,552,470	c. y. @	$ .45	698,611 50
Dipper	330,000	c. y. @	.80	264,000 00
Steam Shovel	696,523	c. y. @	1.10	766,175 30
Rock Excavation	79,016	c. y. @	3.50	266,556 00
Rock Lining	24,940	c. y. @	.15	3,741 00
Concrete	29,563	c. y. @	14.00	413,882 00
Total				$2,412,965 80
CONTROL WORKS				
Rock Excavation	430	c. y. @	5.50	2,365 00
Concrete, reinforced	1,828	c. y. @	40.00	73,120 00
Gate with Rollers, Steel	240,800	lbs. @	.10	24,080 00
Gate Operating Machinery	107,500	lbs. @	.40	43,000 00
Bridge over Canal				25,000 00
Total				$ 167,565 00

CANAL ROCK SECTION

Earth Excavation	3,011,036	c. y. @	1.10	3,312,139 60
Rock Excavation	2,939,365	c. y. @	3.50	10,287,777 50
Rock Fill	1,149,498	c. y. @	.15	172,424 70
Concrete in Walls	50,525	c. y. @	14.00	707,350 00
Concrete in Lining	285,090	c. y. @	14.00	3,991,260 00
Concrete in Whirlpool	54,610	c. y. @	14.00	764,540 00
Anchor Rods, Steel	681,550	lbs. @	.20	136,310 00
Total				$ 19,371,801 80

ICE CHUTE

Open Cut Rock Excavation	64,500	c. y. @	5.50	354,750 00
Concrete, plain	1,290	c. y. @	20.00	25,800 00
Concrete, reinforced	1,720	c. y. @	40.00	68,800 00
Gates and Rigs				50,000 00
Total				$ 499,350 00

TESTING OF WHIRLPOOL SECTION

Concrete plain	630	c. y. @	20.00	12,600 00
Earth fill	21,500	c. y. @	.60	12,900 00
Pumping				10,000 00
Total				$ 35,500 00

Canal Earth Section	2,412,965 80
Control Works	167,565 00
Canal Rock Section	19,371,801 80
Ice Chute	499,350 00
Testing of Whirlpool Section	35,500 00
Total Canal	$ 22,487,182 60

(D) FOREBAY

Earth Excavation	completed			
Concrete Lining	23,220	c. y. @	$14.00	$ 325,080 00
Concrete Walls	3,987	c. y. @	14.00	55,692 00
Anchor Rods, Steel	23,650	lbs. @	.20	4,730 00
Alterations in design				225,000 00
Total				$ 610,502 00

(E) SCREEN HOUSE

SUBSTRUCTURE

Earth Excavation	completed			
Rock Excavation	completed			
Concrete reinforced	26,810	c. y. @	$40.00	$ 1,072,400 00
Structural Steel in Racks	323,575	lbs. @	.075	24,258 13
Structural Steel in Gates	1,088,233	lbs @	.075	81,617 48
Cast Iron Gate Seats				10,000 00
Ice Chute Gate and Rig				25,000 00
Rock Fill	5,483	c. y. @	1.50	8,224 50
Earth Fill	5,052	c. y. @	3.00	15,156 00
SUPERSTRUCTURE				406,980 00
MISCELLANEOUS				100,000 00
Total				$ 1,743,646 11

(F) PENSTOCKS

Tunnel Rock Excavation	11,126	c. y. @	$10.00	$ 111,260 00
Open Cut Rock Excavation	35,475	c. y. @	3.50	124,162 50
Concrete, plain	26,875	c. y. @	16.00	430,000 00
Concrete, reinforced	2,795	c. y. @	40.00	111,800 00
Structural Steel	9,226,187	lbs. @	.1125	1,037,946 04
Rip Rap Wall	19,135	c. y. @	3.00	57,405 00
Total				$ 1,872,573 54

(G) POWER HOUSE

Cofferdam				
Concrete, plain	6,880	c. y. @	$15.00	$ 103,200 00
Pumping				25.000 00
Removal Charges				77,400 00
Substructure				
Rock Excavation	375,014	c. y. @	3.50	1,312,549 00
Concrete, reinforced	99,975	c. y. @	32.00	3,199,200 00
Tail Race Excavation	23.650	c. y. @	5.50	130,075 00
Superstructure				2,673,000 00
Miscellaneous				250,000 00
Emergency Fund				250,000 00
Total				$ 8,020,424 00

(H) HYDRAULIC EQUIPMENT

Complete F. O. B. Queenston				$ 3,233,000 94
Storage, Transportation, Erection	5,400	tons @	60.00	324,000 00
Total				$ 3,557,000 94

(I) ELECTRICAL EQUIPMENT

Complete in place	8,417,360 00

(J) RIGHT OF WAY

Acquired

(K) BRIDGES

$ 1,534,023 82

SUMMARY

(A)	INTAKE	$ 581,640 00
(B)	WELLAND RIVER	1,170,357 85
(C)	POWER CANAL	22,487,182 60
(D)	FOREBAY	610,502 00
(E)	SCREEN HOUSE	1,743,646 11
(F)	PENSTOCKS	1,872,573 54
(G)	POWER HOUSE	8,020,424 00
(H)	HYDRAULIC EQUIPMENT	3,557,000 94
(I)	ELECTRICAL EQUIPMENT	8,417,360 00
(J)	RIGHT OF WAY	Completed.
(K)	BRIDGES	1,534,023 82
	Total	$ 49,994,710 86
	ENGINEERING AND OVERHEAD 8 per cent	3,999,576 87
	Total	$ 53,994,287 73
	INTEREST CHARGES Interest at 6½% per annum compounded semi-annually	4,222,347 72
	Total	$ 58,216,635 45
	TOTAL DISBURSEMENTS To May 1st, 1920, plus interested compounded annually to January 1st, 1923	14,000,000 00
	GRAND TOTAL	$72,216,635 45

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Niagara Development

Hydro-Electric Power Commission of Ontario

Estimate III-C-6

(A) INTAKE

Excavation				
Earth for Piers	21,500	c. y. @	$ .65	$ 13,975 00
Dredging	104,275	c. y. @	.45	46,923 75
Piers				
First Cost of Caissons				40,000 00
Installation of Caissons		each	$3,000 00	111,000 00
Concrete, plain	8,600	c. y. @	15.00	129,000 00
Grillage	215	M FBM	120.00	25,800 00
Booms				
Concrete, reinforced	5,237	c. y. @	40.00	209,480 00
Pontoons				
Structural Steel	268,750	lbs. @	.10	26,875 00
Painting				1,000 00
Total				$604,053 75

(B) WELLAND RIVER

Earth Excavation	2,804,881	c. y. @	$ .45	$1,262,196 45
Rip Rap	26,875	c. y. @	1.00	26,875 00
Total				$1,289,071 45

(C) POWER CANAL

Canal Earth Section				
Earth Excavation				
Suction Dredge	1,498,495	c. y. @	$ .45	$ 674,322 75
Dipper Dredge	330,000	c. y. @	.80	264,000 00
Steam Shovel	696,523	c. y. @	1.10	766.175 30
Rock Excavation	175,977	c. y. @	3.50	615,919 50
Rock Lining	27,413	c. y. @	.15	4,111 95
Concrete	32,250	c. y. @	14.00	451,500 00
Total				$ 2,776,029 50
Control Works				
Rock Excavation	457	c. y. @	5.50	2,513 50
Concrete, Reinforced	1,881	c. y. @	40.00	75,240 00
Gate with Rollers, Steel	322,500	lbs. @	.10	32,250 00
Gate Operating Machinery	139,750	lbs. @	.40	55,900 00
Bridge over Canal				25,000 00
Total				$ 190,903 50
Canal Rock Section				
Earth Excavation	3,011,035	c. y. @	1.10	3,312,138 50
Rock Excavation	130,494	c. y. @	5.50	717,717 00
Rock Excavation	3,442,258	c. y. @	3.50	12,047,903 00
Rock Fill	244,025	c. y. @	.15	36,603 75
Concrete in Walls	50,525	c. y. @	14.00	707,350 00
Concrete in Lining	307,235	c. y. @	14.00	4,301,290 00
Concrete in Whirlpool	61,598	c. y. @	14.00	862,372 00
Anchor Rods, steel	943,850	lbs. @	.20	188,770 00
Total				$22,174,144 25
Ice Chute				
Open Cut Rock Exc.	64,500	c. y. @	5.50	354,750 00
Concrete, plain	1,290	c. y. @	20.00	25,800 00

Concrete, reinforced	1,720	c. y. @	40.00	68,800 00
Gates and Rigs				50,000 00
Total				499,350 00
TESTING OF WHIRLPOOL SECTION				
Concrete, plain	788	c. y. @	20.00	15,760 00
Earth Fill	32,358	c. y. @	.60	19,414 80
Pumping				10,000 00
Total				$ 45,174 80

Canal Earth Section	$ 2,776,029 50
Control Works	190,903 50
Canal Rock Section	22,174,144 25
Ice Chute	499,350 00
Testing of Whirlpool Section	45,174 80
Total Canal	$25,685,602 05

(D) FOREBAY

Earth Excavation	29,025	c. y. @	$ 1.10	$ 31,927 50
Rock Excavation	239,725	c. y. @	3.50	839,037 50
Rock Excavation	145,125	c. y. @	5.50	798,187 50
Concrete Lining	34,905	c. y. @	14.00	488,670 00
Concrete Walls	4,300	c. y. @	14.00	60,200 00
Anchor Rods, Steel	33,863	lbs. @	.20	6,772 60
Alterations in Design				225,000 00
Total				$2,449,795 10

(E) SCREEN HOUSE

SUBSTRUCTURE				
Earth Excavation	3,600	c. y. @	$ 1.10	$ 3,960 00
Rock Excavation	14,050	c. y. @	3.50	49,175 00
Concrete, reinforced	38,808	c. y. @	40.00	1,552,320 00
Structural Steel in Racks	430,000	lbs. @	.075	32,250 00
Structural Steel in Gates	1,451,250	lbs. @	.075	108,843 75
Cast Iron Gate Seats				14,000 00
Ice Chute Gate and Rig				25,000 00
Rock Fill	7,848	c. y. @	1.50	11,772 00
Earth Fill	6,934	c. y. @	3.00	20,802 00
Superstructure				285,000 00
Miscellaneous				90,000 00
Total				$2,193,122 75

(F) PENSTOCKS

Tunnel Rock Excavation	7,633	c. y. @	$10.00	$ 76,330 00
Open Cut Rock Excavation	24,403	c. y. @	3.50	85,410 50
Concrete, plain	18,490	c. y. @	16.00	295,840 00
Concrete, reinforced	3,763	c. y. @	40.00	150,520 00
Structural Steel	6,353,250	lbs. @	.1125	714,740 63
Rip Rap	13,975	c. y. @	3.00	41,925 00
Total				$1,364,766 13

(G) POWER HOUSE

COFFERDAM				
Concrete, plain	5,160	c. y. @	$13.00	$ 77,400 00
Pumping				20,000 00
Removal Charges				58,050 00
SUBSTRUCTURE				
Rock Excavation	407,963	c. y. @	3.50	1,427,870 50
Concrete, reinforced	67,725	c. y. @	32.00	2,167,200 00
Tail Race Excavation	17,200	c. y. @	5.50	94,600 00

Superstructure	1,850,000 00
Miscellaneous	215,000 00
Emergency Fund	215,000 00
Total	.6,125,120 50

(H) HYDRAULIC EQUIPMENT

Complete F.O.B. Queenston		$2,218,040 00
Storage Transportation, Erection	3.600 tons @ $60.00	216,000 00
Total		$2,434,040 00

(I) ELECTRICAL EQUIPMENT

Complete in place	$5,668,460 00

(J) RIGHT OF WAY

Acquired . ...

(K) BRIDGES

$1,534,023 82

SUMMARY

(A)	INTAKE	$ 604,053 75
(B)	WELLAND RIVER	1,289,071 45
(C)	POWER CANAL	25,685,602 05
(D)	FOREBAY	2,449,795 10
(E)	SCREEN HOUSE	2,193,122 75
(F)	PENSTOCKS	1,364,766 13
(G)	POWER HOUSE	6,125,120 50
(H)	HYDRAULIC EQUIPMENT	2,434,040 00
(I)	ELECTRICAL EQUIPMENT	5,668,460 00
(J)	RIGHT OF WAY	Completed
(K)	BRIDGES	1,534,023 82
	Total	$49,348,055 55

ENGINEERING OND OVERHEAD 8 per cent.	3,947,844 44
Total	$53,295,899 99
INTEREST CHARGES	
Interest at 6½% per annum compounded semi-annually	4,692,726 74
Total	$57,988,626 73
TOTAL DISBURSEMENTS	
To May 1st, 1920, plus interest compounded annually to January 1st, 1923	14,000,000 00
GRAND TOTAL	$71,988,626 73

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Niagara Development

Hydro-Electric Power Commission of Ontario

Estimate III-C-12

(A) INTAKE

Excavation

Earth for Piers	21,500	c. y. @	$0.65	$ 13.975 00
Dredging	104,275	c. y. @	.45	46.923 75

PIERS				
First Cost of Caissons				40,000 00
Installation of Caissons		each	@ 3,000.00	111,000 00
Concrete, plain	8,600	c. y.	@ 15.00	129,000 00
Grillage	215	M FBM	@ 120.00	25,800 00
BOOMS				
Concrete, reinforced	5,237	c. y.	@ 40.00	209,480 00
PONTOONS				
Structural Steel	268,750	lbs.	@ $ .10	26,875 00
Painting				1,000 00
Total				$ 604,053 75

(B) WELLAND RIVER.

Earth Excavation	4,207,323	c. y.	@ $ .45	$ 1,893,295 35
Rip Rap	26,875	c. y.	@ 1.00	26,875 00
				$ 1,920,170 35

(C) POWER CANAL

CANAL EARTH SECTION				
Earth Excavation				
Suction Dredge	2,247,742	c. y.	@ $ .45	$ 1,011,483 90
Dipper Dredge	330,000	c. y.	@ .80	264,000.00
Steam Shovel	696,523	c. y.	@ 1.10	766,175 30
Rock Excavation	175,977	c. y.	@ 3.50	615,919 50
Rock Lining	27,413	c. y.	@ .15	4,111 95
Concrete	32,250	c. y.	@ 14.00	451,500 00
Total				$ 3,113,190 [illegible]
CONTROL WORKS				
Rock Excavation	457	c. y.	@ 5.50	2,513 50
Concrete, reinforced	1,881	c. y.	@ 40.00	75,240 00
Gate with Rollers, Steel	322,500	lbs.	@ .10	32,250 00
Gate Operating Machinery	139,750	lbs.	@ .40	55,900 00
Bridge over Canal				25,000 00
Total				$ 190,903 30
CANAL ROCK SECTION—EARTH EXCAVATION				
Earth Excavation	3,011,035	c. y.	@ 1.10	3,312,138 50
Rock Excavation	130,494	c. y.	@ 5.50	717,717 00
Rock Excavation	3,442,258	c. y.	@ 3.50	12,047,903 00
Rock Fill	244,025	c. y.	@ .15	36,603 75
Concrete in Walls	50,525	c. y.	@ 14.00	707,350 00
Concrete in lining	307,235	c. y.	@ 14.00	4,301,290 00
Concrete in Whirlpool	61,598	c. y.	@ 14.00	862,372 00
Anchor Rods, Steel	943,850	lbs.	@ .20	188,770 00
Total				$22,174,144 25
ICE CHUTE				
Open Cut Rock Excavation	64,500	c. y.	@ 5.15	354,750 00
Concrete, plain	1,290	c. y.	@ 20.00	25,800 00
Concrete, reinforced	1,720	c. y.	@ 40.00	68,800 00
Gates and Rigs				50,000 00
Total				$ 499,350 00
TESTING OF WHIRLPOOL SECTION				
Concrete, plain	788	c. y.	@ 20.00	15,760 00
Earth Fill	32,358	c. y.	@ .60	19,414 80
Pumping				10,000 00
Total				$ 45,174 80
Canal Earth Section				$ 3,113,190 65
Control Works				190,903 50
Canal Rock Section				22,174,144 25

Ice Chute				499,350 00
Testing of Whirlpool Section				45,174 80
Total Canal				$26,022,763 20

(D) FOREBAY

Earth Excavation	29,025	c. y.	@ $ 1.10	$ 31,927 50
Rock Excavation	239,725	c. y.	@ 3.50	839,037 50
Rock Excavation	145,125	c. y.	@ 5.50	798,187 50
Concrete Lining	34,905	c. y.	@ 14.00	488,670 00
Concrete Walls	4,300	c. y.	@ 14.00	60,200 00
Anchor Rods, Steel	33,863	lbs.	@ .20	6,772 60
Alterations in Designs				225,000 00
Total				$ 2,449,795 10

(E) SCREEN HOUSE

Substructure				
Earth Excavation	3,600	c. y.	@ $ 1.10	$ 3,960 00
Rock Excavation	14,050	c. y.	@ 3.50	49,175 00
Concrete, Reinforced	38,808	c. y.	@ 40.00	1,552,320 00
Structural Steel in Racks	430,000	lbs.	@ .075	32,250 00
Structural Steel in Gates	1,451,250	lbs.	@ .075	108 843 75
Cast Iron Gate Seats				14,000 00
Ice Chute Gate and Rig				50,000 00
Rock Fill	7,848	c. y.	@ 1.50	11,772 00
Earth Fill	6,934	c. y.	@ 3.00	20,802 00
Superstructure				525,000 00
Miscellaneous				125,000 00
Total				$ 2,493,122 75

(F) PENSTOCKS.

Tunnel Rock Excavation	15,050	c. y.	@ $10.00	$ 150,500 00
Open Cut Rock Excavation	47,945	c. y.	@ 3.50	167,807 50
Concrete, plain	36,335	c. y.	@ 16.00	581,360 00
Concrete, reinforced	3,763	c. y.	@ 40.00	150,520 00
Structural Steel	12,491,500	lbs.	@ .1125	1,405,293 75
Rip Rap Wall	26,123	c. y.	@ 3.00	78,369 00
Total				$ 2,533,850 25

(G) POWER HOUSE

Cofferdam				
Concrete, plain	8,708	c. y.	@ $15.00	$ 130,620 00
Pumping				35,000 00
Removal Charges				97,965 00
Substructure				
Rock Excavation	522,289	c. y.	@ 3.50	1,828,011 50
Concrete, reinforced	131,688	c. y.	@ 32.00	4,214,016 00
Tail Race Excavation	32,250	c. y.	@ 5.50	177,375 00
Superstructure				3,500,000 00
Miscellaneous				300,000 00
Emergency Fund				300,000 00
Total				$10,582,987 50

(H) HYDRAULIC EQUIPMENT

Complete, F.O.B. Queenston				$ 4,322,780 00
Storage, Transportation, Erection	7,200	tons	@ $60.00	432,000 00
Total				$ 4,754,780 00

(I) ELECTRICAL EQUIPMENT.

Complete in Place	$11,166,260 00

(J) RIGHT OF WAY

Acquired.

(K) BRIDGES

$1,534,023 82

SUMMARY

(A)	INTAKE	$ 604,053 75
(B)	WELLAND RIVER	1,920,170 35
(C)	POWER CANAL	26,022,763 20
(D)	FOREBAY	2,449,795 10
(E)	SCREEN HOUSE	2,493,122 75
(F)	PENSTOCKS	2,533,850 25
(G)	POWER HOUSE	10,582,987 50
(H)	HYDRAULIC EQUIPMENT	4,754,780 00
(I)	ELECTRICAL EQUIPMENT	11,166,260 00
(J)	RIGHT OF WAY	Completed
(K)	BRIDGES	1,534,023 82
	Total	$64,061,806 72
	ENGINEERING AND OVERHEAD 8 per cent.	5,124,944 54
	Total	$69,186,751 26
	INTEREST CHARGES	
	Interest at 6½% per annum compounded semi-annually	5,743,755 42
	Total	$74,930,506 68
	TOTAL DISBURSEMENTS	
	To May 1st, 1920, plus interest compounded annually to January 1st, 1923	14,000,000 00
	GRAND TOTAL	88,930,506 68

FINAL REPORT

ON

CHIPPAWA HYDRO-ELECTRIC PROJECT

FOR

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

TORONTO, CANADA

HUGH L. COOPER & CO.
Consulting Engineers
101 Park Avenue
New York City

October 22, 1920

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[COPY]

New York, N.Y.,
HUGH L. COOPER & Co.

October 22, 1920.

SIR ADAM BECK, Chairman,
Hydro-Electric Power Commission of Ontario,
Toronto, Ontario, Canada.

Dear Sir:

1. In accordance with our arrangement with your Commission on April 26, 1920, we began actively the engineering examinations as described in our formal letter to your Mr. Acres dated May 1, 1920, a copy of which is attached hereto, marked Appendix C. The action of the Commission accepting our proposal was taken on April 27, 1920, according to a letter we have received from Chief Engineer Gaby, dated May 15, 1920. All of the work of investigation was completed on August 17, 1920 except for a very small amount of confirmatory investigation work which has taken place since August 17, 1920. During the time between April 26th and up to date, we have given your entire Chippawa Project our very best study.

2. PRELIMINARY REPORT.—On August 14, 1920, we filed with you our preliminary report dated August 7, 1920, a copy of which is attached hereto, marked Appendix A. The August 7th report was accompanied by cost estimates, a copy of which is attached hereto, marked Appendix B. The foregoing reports call for a final general report as follows:

3. SUBMITTED DRAWINGS.—We attach hereto as a part of our general report two sets of prints from our drawings Nos. 3438, 3439, 3440, 3441, to which reference should be made for understanding what follows. These blueprints will be hereinafter referred to as Appendix D.

4. SUBDIVISIONS OF PROJECT.—We have divided your project into the following subdivisions, the locations of which are indicated on Drawing 3438.

(*a*) INTAKE.—The point of diversion from the Niagara River is near the town of Chippawa at the mouth of the Welland River. At this point masonry structures are necessary for the effective diversion of the amount of water that is to be used for power purposes. This intake is required to effect the water diversion and at the same time relieve the water so diverted from all foreign matter that would interfere with the most efficient use of the same.

(*b*) WELLAND RIVER SECTION.—After the water is diverted from the Niagara River it is to flow up the Welland River for a distance of approximately 24,440 feet whence it is diverted into an artificial channel called the "earth section of canal." The section of the water transmission between the intake and the earth section of the canal will be referred to herein as the "Welland River Section."

(*c*) CANAL SECTION.—The artificial canal section between the Welland River and the forebay is approximately 45,300 feet long and is treated in two subdivisions:

1. The first or upper division designated as "earth section of canal," which is approximately 6,500 feet in length.

2. The second division from the control works to the forebay called the "rock section of the canal," which is approximately 39,000 feet long.

(*d*) CONTROL WORKS.—Control works are planned to control the entrance to the rock section. These control works consist of one large steel gate and necessary masonry abutments.

(*e*) FOREBAY—SCREEN HOUSE—PENSTOCKS AND POWER HOUSE.—The bottom end of the canal is enlarged into a forebay to permit of the installation of the penstocks that are to carry the water to the power house below. The top end of the penstocks terminate in abutments provided with screens and gates protecting and controlling water passing into the penstocks.

5. WATER TRANSMISSION.—Water transmission as used in this report will refer to any or all of these structures that will be used in transmitting water from the intake to the tail race below the power house.

6. PERSONNEL OF THE INVESTIGATION.—All of the field work was under the immediate charge of Mr. Dexter P. Cooper. We used a staff of engineers in the field. In addition to the field examinations under Mr. D. P. Cooper, our New York office engineers supplemented the work of the field organization. The field investigation had its headquarters on the works at Niagara Falls, Ontario. The results we have submitted to you previously and are submitting herewith have been arrived at after a study of the entire problem by all of the men in our organization qualified by experience to discuss and express opinions thereon.

7. REPORT OF AUGUST 7TH.—In this report no attempt will be made to restate any of the views or opinions submitted in our report dated August 7th, and the August 7th report together with the matter herewith submitted constitutes our final discharge of all the work we understand we are to perform for you under the existing contract.

8. HORSEPOWER AS USED HEREIN DEFINED.—The word "horsepower" as used herein will always refer to an electrical horsepower delivered to the high tension lines going out of the generating station. The foregoing definition requires that all friction and generating losses have been provided for and that the horsepower is net electrical horsepower deliverable to the transmission systems referred to above.

9. DATA REGARDING LOSSES.—In computing the discharging capacity of the various water transmissions the standard Kutter's formula has been used for the reason that engineering records supply a greater amount of dependable data for the use of this formula than would be found for the use of any other formula for this class of engineering computation. The successful use of any formula for water transmission depends entirely upon the intelligent selection of coefficients of friction, and after such selection, the determination of the results depends only upon correct mathematics, which mathematics are capable of absolute check. The coefficients of friction assumed are as follows:

For the Welland River Section..............................	.04
For the earth section of the canal up to the control works	.04
For the concrete lined artificial canal section	.014

We have assumed that in the winter time at least 7½% of the transmitted water will be required for the proper skimming off of ice, snow and frazil that will accumulate in the 69,700 feet of water transmission between the intake and the forebay. This 7½% of water should be diverted at the point shown on Drawing No. 3438, marked "Ice Chute," and therefore will not be available for power purposes. We have assumed the efficiency of the turbines to be 91%, and that of the generators 96%, including excitation and transformer losses.

10. The above assumptions for friction losses are not agreed to by your engineers. We are prepared to submit important authorities fully supporting our opinion. We hold strongly to the view that optimism in such a fundamental assumption as friction loss is very dangerous practice especially when so small an expenditure is required to assure safety and where the assumptions of your engineers are unsupported by practical experience. In addition to the foregoing we invite your attention to the fact that this power plant is to depend on an open canal system over 13 miles long for its water supply, and to the fact that such an open canal system will inevitably have its discharging capacity appreciably reduced by debris that will fall into the canal and cannot practicably be removed in spite of any precautions that can be installed. The foregoing plus six curves in the 13-mile stretch of open canal and plus the indeterminate losses that are bound to occur in the 1,600-foot long whirlpool section due to eddies resulting from changing velocities therein, call for the adoption of our recommendations if future heavy losses of power are to be avoided. The foregoing difficulties cannot be corrected for the canal sections after the plant is in operation without shutting down the plant entirely.

11. Resulting Operating Heads.—For reasons set forth in our report of August 7th we have assumed that the elevation of the water at the intake will be 558.00, and at the tail race it will be Elevation 243.00 under present conditions. On the foregoing basis we find the net operating heads to be as follows:

(*a*) For 14,500 c.f.s. used according to present designs.......... 292.3 ft.

(Present canal design will carry only 14,500 c.f.s.)

(*b*) For 15,000 c.f.s. used according to recommended changes in present designs .... 301.04 ft.

(*c*) For 20,000 c.f.s. used according to recommended changes in present designs .... 299.04 ft.

It should be noted here, however, with the respect to the Elevation 243.00 that the future requirements in Canada for hydro-electric power will undoubtedly require the regulation of the level of Lake Ontario in a manner that will make the tail water elevation after regulation, four feet higher than now obtains or Elevation 247.00. It should also be noted that at various times in the future, due to ice gorges that will form from time to time in the vicinity of this power house, that the elevation of tail water will be considerably increased for short periods, causing reductions of operating heads and reducing the power output appreciably. To take care of consumers at such times of reduction of head the operating department should be allowed by future treaty arrangements to divert such an excess above the normal diversion as will compensate for the temporary loss of head.

12. Resulting Amounts and Costs Per H.P.—For the above three plans, the results will be as follows:

For 11 (*a*)—

Total H.P.	389,000
Total Cost	$76,636,931.00
Cost per H.P.	$197.00

For 11 (*b*)—	
Total H.P.	414,600
Total Cost	$73,531,635.00
Cost per H.P.	$177.36
For 11 (*c*)—	
Total H.P.	549,200
Total Cost	$88,930,506.00

A comparison between 11 (*a*) and 11 (*b*) shows the following:

11 (*b*) costs less than 11 (*a*) by	$3,105,000.00
II ((b) gives 25,600 extra H.P. This extra H.P., according to 11 (*a*) costs $197.00 per H.P., thus producing a value for this extra H.P. of	$ 5,043,200.00
Total gain in value by adopting Paragraph 13	$8,148,200.00

A comparison between 11 (*a*) and 11 (*c*) shows the following:

Amount of H.P. in 11 (*c*)	549,000
Amount of H.P. in 11 (*a*)	389,000
Difference	160,000 H.P.
Value of 160,000 H.P @ $197.00	$31,520,000.00
Less extra cost of 11 (*c*) over 11 (*a*)	$12,293,575.00
Total gain in value by adopting 11 (*c*)	$19,226,425.00

NOTE: See Paragraphs 1 and 2 of Appendix A for recommendation re 11 (*c*).

13. ROCK SECTION OF THE CANAL.—As noted in Paragraph 10 we find ourselves unable to agree with your engineers as to the discharging capacity of the entire water transmission system and particularly with reference to the rock section of the canal, 39,000 feet long. With respect to the rock section of the canal, your engineers have furnished us with prints from their Drawing No. 7-3-225-E on which is indicated the slope of the bottom of the rock section of the canal from Station 65.00 to the beginning of the forebay at Station 452.87. This drawing shows that the slope of the bottom of the canal is .0002113. That part of the rock section of the canal where excavation is now completed shows the above slope, and we find that your engineers correctly adopted this slope at the time when the quantity of water to be transmitted was 6,500 cubic feet per second. Since the adoption of 6,500 c.f.s. as the amount of water to be transmitted, your engineers have increased the quantity of water to be transmitted to 15,000 c.f.s. but have not increased the slope of the canal, and as far as we know have not increased any other dimension of the canal that would increase its discharging capacity. In any event the canal as now laid out is not the correct plan for 15,000 c.f.s. The use of the present design for this canal will cause you to lose 25,600 H.P. unless you adopt the following recommendation, to wit:

Increase the slope of the floor of the canal to such an amount as will be determined by the use of .014 as the value of the coefficient "N" in the Kutter formula so that the floor of the canal and the surface of the 15,000 c.f.s. flowing therein are parallel.

This recommendation will call for an extra excavation in the bottom of the canal of 291,300 cubic yards and a small amount of increased lining, at a total cost of $1,315,000.00. If the foregoing advice is followed you will secure an additional 25,600 H P. at a cost of $51 37 per H.P., an opportunity you cannot afford to lose. In the above determination it is not necessary to include any additional items, as all other expenditures are already in the estimate.

14. Extra Recommended Facilities.—In Paragraph 12 we show how increased values amounting to $8,148,200.00 can be effected by the use of 15,000 c.f.s., and $19,226,425 by the use of 20,000 c.f.s. Attention should here be directed to the facts that the estimates for the total cost of 11 (*b*) and 11 (*c*) include—

Skimming works in front of forebay, Paragraph 12, Appendix A	$199,350.00
Additional distributing system in forebay, Par. 13, Appendix A	$225,000.00
Extra allowance for power house foundations, Par. 16, Appendix A	$250,000.00
Total for extra facilities not credited in Par. 12, and not included in existing design	$971,350.00

15. Intake.—Paragraph 6 of Appendix A sets forth a saving of $2,777,453.00 as possible by abandoning your present plan of intake and substituting therefor a fixed masonry boom. The fixed masonry boom arrangement has in addition to its less cost the certainty in advance of its construction that it will be absolutely effective for the work it will be called upon to perform.

No more severe skimming tests at an intake have ever been applied than is found in the successful twelve years' experience at the Toronto Power Company. This plant has not been shut down or lost a kilowatt of energy on account of floating ice or frazil in the entire history of its operation. No other plant at Niagara Falls on either side of the river has to its credit anything approaching a similar record. It is located immediately below the Chippawa intake and in the design of the intake which we have worked out to cost $581 640.00, we have used even more conservative flow ratios than have been successfully used at the Toronto Company.

The success of the recommended intake depends solely upon the fact that the velocity of the water on the outside of the intake will be so largely in excess of the velocity of the water that passes through the submerged openings of the intake to the Welland River as to prevent absolutely any suction through the intake opening. Our intake does away entirely with the expense of the lock in the adopted design. Our intake design has been used for six years with entire success under very severe ice conditions at Keokuk, Iowa.

The plan of intake which your engineers have adopted is, in our judgment, unfortunate, is an experiment based upon theoretical analysis and a small model experiment at Niagara Falls, which in no sense represents working conditions. The gathering dam at the Toronto Power Company shows large volumes of gravel and stone and water-logged debris travel down the bed of the river at all seasons of the year. This material has accumulated in The Toronto Power Company forebay to an extent requiring almost continuous dredging to keep the same out of the screen room. It is a well known fact that in the winter time frazil moving along the bed of all swift rivers picks up considerable quantities of stone and carries it along to some point of lodgment.

The history of the Cedars plant from the beginning of its operation up to October 15th of this year has been one of continuous labor by divers in front of the Cedars screen rack in removing by the use of derricks loading into scale boxes many hundred yards of rock and heavy water-logged debris that of itself will plug shut the intake slots of the entire finger system in your adopted intake design. The adopted design is such as to very effectively reach out and gather into and onto itself all of the materials that will come down the river bed for 600 feet of its width.

On October 15th of this year, we saw scale boxes come out of the water in front of a screen at Cedars where stones varying from one cubic foot to four cubic feet had been dragged to the space immediately in front of these screens. The operators at Cedars informed us that this operation is a continuous performance with them. The river stretch between the Cedars intake to slack water in Lake St. Francis is only about a quarter of the length of the river stretch above your intake to similar slack water in Lake Erie. We are forced to the conclusion because of specific observations, which are in no sense theoretical, that the six intake fingers will fill up and plug up to such an extent as to make their use impracticable.

The assertion of your engineers that if anything of the above sort happens they can produce a sufficient head to correct the difficulty is an impossible conclusion. It is our opinion that after a very few years of operation of your proposed intake design that it will be so plugged up with material that cannot be removed because of the design of the intake fingers, that you will have worse conditions at the Chippawa intake than have ever obtained at the intake of the Canadian Niagara Power Company.

Even if it could be admitted, which it cannot, that the adopted design would work as satisfactorily as the recommended boom design, there would still be no justification for the wasting of $2,777,453.00.

16. Forebay and Ice Chute.—In paragraphs 12 and 13 of Appendix A, we discuss the necessity for skimming works at the head of the forebay at Station 444.00 and certain modifications we believe necessary in the forebay basin if continuous operation of the plant is to be reasonably expected.

When the plant is completed and in operation as now designed, the velocity of the water in the rock section of the canal will vary from 13 feet per second maximum, down to less than two feet per second on Sundays. These velocity conditions during the low temperatures of winter will cause large volumes of thin ice to form on the 13-mile surface of the water transmission system. The changes of velocity will also cause a very considerable amount of frazil to form, and the frazil, ice and snow that will accumulate over this 13-mile open canal system will produce an amount of ice debris that will have to be skimmed away from the forebay, failing in which the forebay itself will fill up and shut off the entire flow from the turbines.

The foregoing assertions are not made in a spirit of alarm, but are based upon practical knowledge of what will happen at this plant. In order to take care of such an inevitable situation, we have recommended the ice chute and also have recommended that the forebay itself be provided with a distributing device that will keep the floating ice and frazil that is not taken out by the ice chute, well distributed over the entire width of the forebay at the screens to the forebay ice chutes thus preventing what would otherwise result in a massing of the debris at the center of the screen house with results that must be avoided. We therefore beg to reaffirm all of the recommendations with respect to the above two topics.

17. Screen House and Penstocks.—In paragraphs 14 and 15, Appendix A, we have made reference to some changes in design that we would recommend in the general report in existing designs for the screen house and penstocks. Owing to the delays which have ensued in the preparation of this final report, over which we have had no control, and owing to your desire for an immediate presentation of this final report, we will omit any further discussion of either subject.

18. LABOR.—In paragraph 22 of Appendix A, we refer to some special recommendations with reference to the handling of labor that are to be submitted in the general report.

With respect to the foregoing our observation of the labor performance on this entire job has convinced us that broadly speaking, this labor has been very inefficient. This inefficiency in our judgment has not been due to any lack of zeal or intelligence on the part of those immediately responsible for the handling of the labor, and we believe that the Construction Superintendent, Mr. George Angell, has achieved the best results that could possibly have been obtained as far as labor is concerned under the very trying conditions through which Mr. Angell and his subordinates have passed.

All over the world it has always been observed that labor working for any government is always abnormally inefficient. The degree in which such labor fails to perform a reasonable day's work varies. The outstanding, universal explanation of this difficulty of labor is found in the fact that a rich government is paying for their time.

We believe that a very considerable reduction in the cost of the work still to be performed and in the time in which it can be performed can be effected by introducing a practical bonus system on the entire job. This bonus system would provide that all of the labor excepting division superintendents would be put on a wage at least ten per cent below what is now current and that such a wage would be called a base wage. In addition to the base wage, the labor should be paid monthly a bonus based upon the relationship between the cost of the work as they performed it and the estimated cost of the Construction Department, the savings to be divided on a fifty-fifty basis. Such an arrangement if honestly administered by the Construction Department, and if arranged so that the labor itself could have three or four representatives to check up the working of the bonus system, would place the entire organization on a semi-profit sharing basis that would give a stimulus to the undertaking not otherwise obtainable. We see no reason why honest profit-sharing cannot be introduced on work where such large quantities exist with respect to so few different kinds of labor.

19. QUANTITIES AND UNIT COSTS.—All quantities referred to in this estimate have been checked by our own instrumental surveys with sufficient accuracy to overtake all errors above 5%. We have checked the accounting departments in Toronto and Niagara sufficiently to warrant our use of the figures quoted. Unit costs used are based upon past performance of the Construction organization and upon cost conditions and construction plans in commission September 1, 1920. If labor and material costs after September 1, 1920 recede then our estimates of costs herein will recede by the same percentage and *vice versa.*

20. DRAWING NO. 3439. Reference is made to Drawing No. 3439 on which is indicated a set of profiles taken along the center line of the water transmission from the Welland River to the Niagara River. The profile is self-explanatory.

On this same sheet we show two charts, one with reference to the earth excavation and the other with respect to the rock excavation.

It will be observed on the earth excavation chart that on May 1, 1920, 54% of the necessary earth excavation was yet to be done and 46% had been completed. The relative location and the proportions obtaining at the various stations are shown on the chart. On May 1, 1920, 79% of the rock was yet to be excavated, and 21% was completed.

The uncompleted excavations, both of rock and earth, are more difficult of performance than the percentages that have been completed because of excess of moisture that will be formed in the uncompleted work.

21. DRAWING No. 3440.—Drawing No. 3440 is a chart showing the comparative costs for the ultimate installations for the three cases specified, and the remarks made with respect to Drawing No. 3441 will apply to this drawing.

22. DRAWING No. 3441.—On Drawing No. 3441 we have shown graphically and analytically the various elements of costs that make up the totals that are referred to in detail in Appendix A. It has occurred to us that an analysis of this kind would have given an added opportunity for comprehending the magnitude of the elements in this project.

We desire at this time to mention particularly the item of interest charges. The interest charges have been compounded semi-annually at 6½%, and in computing the total interest charges for the different cases, we have assumed that when five units are completed and in operation, the selling price for the current from these five units will be sufficient to carry all interest charges for the entire plant up to that date, and that the interest charges for additions to the plant, until the complete installations are ready for operation, will be installed in units not calling for over one year of interest during their construction period.

It is proper for us to set forth the above method of arriving at this complex question in order to have a basis for your consideration. If the amount at which the current from the first five units is charged is too low a price to carry all of the previous interest charges, then the estimates which we have submitted for the total cost and the horsepower costs will be too low by the amount of such deficiency.

23. TIME OF COMPLETION.—There has been a wide difference of opinion as between your engineers and ours regarding the time this plant will be completed, ready for operation. We have based all of our estimates on our belief that five units will not be completed ready for commercial operation before January 1, 1923. We agree that by good luck it may be possible to start operation with two units three months earlier than January 1, 1923. It is quite feasible to start the plant before all of the work in the Welland River section is completed, but the Welland River section is not the controlling factor in this time study.

There are two controlling factors in the time study and they are, first, the time in which the rock canal can be completed, and second, the time when the power house and its contents can be completed sufficiently to admit of commercial use. Much has been said on this subject of the time of completion. We have therefore given the uncompleted work to be done several check studies with the result in each case that we are unable to modify or change the views above expressed.

24. WHIRLPOOL SECTION.—In Paragraph 11, Appendix A, we speak of the whirlpool section. We desire to add to paragraph 11 as follows:

The whirlpool section is incapable of any engineering or mathematical analysis. The efficiency of the designs for this section will have to be determined by practical judgment. We are very certain that the slope 1½ : 1 as now adopted is too steep, and when this section is filled with water, the supporting loose rock will not stand a slope of 1½ : 1 and will slide into a flatter angle of repose, probably 2 : 1 or at least 1¾ : 1. It would therefore seem unwise to spend the large sum of money required for concrete facing for the whirlpool section until the supporting rock had been tested as to the angle of repose when immersed. Several checks of the angle of repose for immersed rock were made of the same class of rock you will use in this whirlpool section, and these checks confirm the recommendations here made.

We have, therefore, recommended that at the two ends of the whirlpool section (about sixteen hundred feet apart between Stations 330.00 and 350.00) to be blocked off by the construction of temporary dams built to such heights as will permit of filling this section to a test elevation of 570, and we believe that this Elevation 570 should be maintained for a period of eight months. The application of such a test will go far to settle the sufficiency of the artificial fill that has been made for the support of the canal at this place, and at the same time will allow the loose rock slope walls to adjust themselves to their natural immersed slope. If this test is not adopted, you will find that the concrete facings will be disrupted by slides when the canal is first filled, requiring that the canal system be unwatered for their repair.

25. Plant Testing and Future Power Growth in Canada.—The efficiency and capacity of any hydro-electric plant can be determined only when minimum conditions of water supply and head are encountered. Where an investment of over $75,000,000.00 is contemplated the future should be rationally estimated in order to make certain that the investment will now fit into what is really in the best interest of Canada in the future. This we have attempted to do in the recommendations herein. Power consumers in Canada and the United States have already over-suffered from failure to look into the future and from ill-considered installations at Niagara and on the St. Lawrence River. The Hydro-Electric Commission plans at Chippawa should be in full harmony with future power needs in Ontario, and the intake levels and plans correspondingly adjusted. The amounts of power we have specified are those amounts which will be deliverable when further Niagara River power diversions reduce the intake level to 558. Plant tests from three or five units will have practically no value in indicating what the actual, practical future total capacity of the plant will be.

26. 20,000 C. F. S. Diversion.—We are firmly of the opinion that the best interests of Ontario for all future time require that the Chippawa plant be now enlarged to 20,000 c.f.s. capacity, and that all recommendations herein related to the use of 20,000 c.f.s. should be adopted immediately.

27. Conclusion.—In conclusion, when we undertook this work the first of May, we instructed Mr. D. P. Cooper, and through him all of our engineers who were placed on this problem, to the effect that in every reasonable way we were to seek conclusions that would agree with your engineering and construction departments. The spirit in which the work was undertaken was and is now a desire to approve. The engineering profession for many years in America and in Canada, and in other parts of the world has been justly accused of an all prevalent tendency to criticise and an unwillingness to see good in the work of others. Some observers go so far as to say that the above difficulties should not be applied to engineers alone, but should be applied to all classes of people.

That we have been forced to differ with your engineers in important particulars is a matter of very deep regret with us all. We have not called your attention to several other criticisms that we could also enumerate for the reason we believe no practical good would result to you in our following such a course further.

All of the differences we have herein discussed, however, have been taken up in detail with your engineers without agreement with them, and we have therefore only one recourse and that is to file with you the foregoing.

Yours very truly,
(Signed) HUGH L. COOPER & CO.

[COPY]

APPENDIX "A"

REPORT

ON

CHIPPAWA HYDRO-ELECTRIC PROJECT

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

LETTER OF TRANSMITTAL

to

SIR ADAM BECK

Chairman

HUGH L. COOPER & CO.
Consulting Engineers
101 Park Avenue
New York City

August 7, 1920

[COPY]

New York, N.Y.,
August 7, 1920.

SIR ADAM BECK, Chairman,
Hydro-Electric Power Commission of Ontario,
Toronto, Ontario, Canada.

Sir:

On April 22, 1920, your Commission gave us instructions calling for a general report from us on your Chippawa Hydro-Electric Power Project. Verbal instructions from you have emphasized the desire of the Commission that our examinations should be thorough and comprehensive, and thus enable us to submit findings of a definite character. Our work since May 5th, 1920, has been continuous with as many engineers and accountants as we believed necessary for the faithful discharge of the duty you have imposed.

We find the general plan of an open canal system as located on the plans submitted to us by your engineers, to be the best that could have been adopted when the history of your project is fully understood. The project as a whole is the most ambitious hydro-electric undertaking yet devised by engineers on this continent or elsewhere.

We believe the expenditures which you will be required to make on this project will be justified by the beneficial results which will accrue to the industrial life of the Province of Ontario.

The report of our findings and recommendations will consist of the following digest and summary, and a complete supplementary report, which will follow later, giving details of all our investigations and reasons for our recommendations.

1. This Project as originally planned called for the use of 6,500 c.f.s. and was later increased to 15,000 c.f.s. We are of the opinion that this quantity of water should be increased to 20,000 c.f.s. Owing to the type of water transmission adopted by your engineers, this increase in the use of water is possible without any appreciable loss of money for work thus far completed.

2. The question of the availability of 20,000 c.f.s. is of first importance. The United States Government engineers are about to recommend to the American Federal Congress that 80,000 c.f.s. be diverted from the Niagara River for power purposes; 40,000 c.f.s by Canada, and 40,000 c.f.s. by the United States.

The inefficient use of water at Niagara Falls has become a serious problem. The American Government is requiring the abandonment of one inefficient plant on the American side. The Commission may ultimately decide that the best interest of the public will be served by an arrangement with the Canadian Niagara Power Company for the use by the Chippawa plant of the 8,225 c.f.s. which are now being inefficiently used by the Canadian Niagara Power Company.

The unused quantity of water under the present Treaty allotments amounts to 6,610 c.f.s. The balance needed to complete the recommended 20,000 c.f.s., namely 1,165 c.f.s. could be taken from the Ontario Power Company.

3. The normal elevation of the water surface at the point of diversion from the Niagara River, as adopted by your engineers is 560.50.

Owing to the imminence of considerable increased diversion from the Niagara River for power purposes above those now permissible, we are of the opinion that the elevation of the water surface at the point of diversion should be taken as El. 558.00. We find that with 15,000 c.f.s. in commission with normal tail water, the minimum operating head will be 292 feet, and with 20,000 c.f.s., this head will be 299 feet.

4. The term "horsepower" as used in this report, will mean an electrical horsepower delivered to the step up transformers in the generator station.

In estimating the quantity of horsepower that will be produced by different plans discussed, we have used the following coefficients:

Kutter's formula has been used for all water transmission determinations where 0.04 has been applied for canal sections in earth, and .04 for concrete-lined canal sections. We have made a total deduction of 7½% of the quantity of water entering the intake, to be used for flushing purposes during the winter season, and to compensate for probable wind losses. The general report will contain our reasons for the use of the foregoing coefficients.

5. We recommend certain changes in your present adopted plans, as follows:

6. INTAKE.—We believe the design of intake adopted by your engineers should be abandoned, and a fixed masonry boom substituted therefor. We find the plan adopted by your engineers will cost $3,359,093.80. The cost of the substitute fixed boom protection will be $581,640.00.

We are certain the intake proposed by your engineers would be a disappointment if built, for reasons which will appear in our general report. The saving resulting from this recommendation amounts to $2,777,453.80. The fixed boom arrangement proposed follows successful engineering precedents at the Toronto Power Company plant, and at Keokuk, Iowa, and other plants designed by us.

7. WELLAND RIVER SECTION.—We recommend that all of the Welland River Section, except that part near Station 244-00, be excavated with slopes 1 : 2, and the excavation be accomplished by the use of a suction dredge instead of the dipper dredge and cableway now being used.

8. CANAL SECTION.—We recommend that the canal section between Stations 0-00 and 45-00 be excavated to slopes 1 : 2 by use of the suction dredge method. If recommendations in paragraphs 7 and 8 are adopted, we estimate the following savings will be effected:

9. SUCTION DREDGE SAVINGS.—On the Welland River Section $635,000.00 for 15,000 c.f.s., and $1,051,000.00 if 20,000 c.f.s. are used.

For the canal section, the saving will be $1,108,000.00 for 15,000 c.f.s. and $1,560,000.00 for 20,000 c.f.s.

Our investigations show that the material referred to in paragraph 9 can be taken out by a suction dredge in 75% of the time required by the methods now planned. In addition to the foregoing, the use of the suction dredge will release a considerable amount of your present equipment, thus further guaranteeing a sufficient amount of apparatus for the balance of your excavations.

The total saving due to the use of the suction dredge method will be $1,743,000.00 if 15,000 c.f.s. are developed, and $2,611,000.00 if 20,000 c.f.s. are developed.

10. BRIDGES.—We are of the opinion that material savings in the cost of uncompleted bridges can be made, but as this phase of the problem calls for

considerable time for precise recommendations, no attempt at specific advice on this subject will be made here.

11. WHIRLPOOL SECTION.—In the whirlpool section we find your engineers have used the best care possible for this difficult portion of the work, but in view of the unusual conditions that exist in this section, we recommend that a test be made of the stability of the whirlpool section by filling it with water before any concrete lining is placed on the slopes.

12. SKIMMING WORKS.—We recommend that near Station 444-0 there be constructed a complete skimming works for the effective removal of floating frazil and snow accumulating between the intake and this station. The cost of this necessary facility we estimate to be $499,350.00.

13. FOREBAY.—We believe the forebay as now designed for either 15,000 or 20,000 c.f.s requires modifications if satisfactory operating conditions are to be secured.

We recommend the construction and the experimental use of a concrete or wooden model to scale 1 : 20, of the forebay, and a study of the flow data thus produced. This data will prove the necessity for changes in the forebay design, and be a safe guide for the adoption of the most economical plans for this need.

In our estimate we have allowed $225,000.00 for this test, and for the resulting necessary alterations in the design of the forebay.

14. SCREEN HOUSE.—The general designs of screen house and penstock intakes are satisfactory. We will, however, recommend changes in the detail of the design in our general report.

15. PENSTOCKS.—The general design of the penstocks is satisfactory. The question of expansion joints and other details will be referred to in the general report.

16. POWER HOUSE FOUNDATIONS.—During the period of our investigations we caused fifteen holes to be bored on the power house site. These disclosed the location and character of the rock which will serve as foundation for the power house. The foundation rock available is a red shale of acceptable quality for bearing purposes. These foundations, however, will be exposed to additional indeterminate and excessive lateral pressures from ice jams that occur in the river at and near the power house site.

We recommend that further borings be made in the river adjacent to the power house site, for the purpose of conclusively ascertaining the extent of the rock slopes. If further explorations show that the present power house location is in any danger from overhanging or insufficient slopes, the present location should be moved back from the river to such a position as good judgment dictates.

We have included in our estimate, $250,000.00 to cover the contingency of a possible change from the present location.

17. TURBINES.—The hydraulic machinery under contract with Wm. Cramp & Sons is approved. Your contract requirements with the Wellman-Seaver-Morgan Company, while satisfactory as far as the guarantees are concerned, require special care with respect to a most thorough inspection of all of the work called for by this contract.

18. VALVES.—The contract for the Johnson valves is in the main satisfactory, but special care should be devoted to inspection of details of design and shop work.

19. ELECTRICAL APPARATUS.—The design of the electrical apparatus has not been studied. The statements of your engineers, with respect to the same, have been accepted as satisfactory.

20. POWER HOUSE SUBSTRUCTURE AND SUPERSTRUCTURE.—The general design of the power house indicates a stable structure, but no examination of the details has been possible for want of time. It seems to us that considerable savings can be effected by a re-design of the power house substructure.

No design of the superstructure has been submitted, but we have estimated that a satisfactory design of superstructure can be provided at a cost not exceeding 40 cents per cubic foot, excluding cranes.

21. ORGANIZATION.—We are of the opinion that all the engineering and business management connected with the design and construction of this plant with complete authority over every detail therein, should be located at Niagara Falls, Ontario, on the works.

We believe that the accounting system as now installed, is too intricate, and that it should be greatly simplified and thus made to be of the maximum assistance to the Construction Department. We recommend that all accounts be audited by independent, certified public accountants every three months during the construction period. Our estimates of cost have necessarily been based, as far as tools and equipment are concerned, on figures supplied by your Accounting Department.

We recommend that a complete inventory be made at once of all tools machinery and materials that have been bought for this work, and that this inventory be checked every ninety days, in the future, for the guidance of the Engineering and Accounting Department.

We recommend that your Engineering and Construction Departments immediately prepare a work time schedule, setting forth specifically the monthly expected construction progress that is required for the final promised completion ready for commercial operation date.

Upon the adoption of such a schedule, the same should be filed with the Commission, and the Construction Department should thereafter make a monthly report to the Commission setting forth clearly the relationship between actual achievement and the submitted scheduled forecast, for, in no other way can the Construction Management be held accountable.

We recommend that the Construction Department organize, maintain and test at least every ten days, an adequate system of fire protection wherever fire could interfere with construction progress, and that special vigilance be displayed in and about rock crushing and concrete mixing plants.

22. LABOR.—Special recommendations with reference to the handling of labor will be submitted in the general report.

23. COST.—The following paragraphs contain the discussion of the final costs and dates of completion for commercial operation, and the details for each case will be set forth in the final report.

Our examination of the records indicates a total expenditure of $19,936,370.86 up to May 1st, 1920, to which should be added $504,000.00 accrued interest from October 31st, 1919 to May 1st, 1920, making a total cost of the work to May 1st, 1920, of $20,440,000.00.

CASE I.—If the work is completed according to your present plans using 15,000 c.f.s., we estimate the cost will be as follows:

(A) Amount of H.P.	258,000
Number of Units	5

	Total Cost	$66,423,418 00
	Cost per H.P.	$ 257 45
	Time of Completion	January 1, 1923
(B)	Amount of H.P.	389,000
	Number of Units	9
	Total Cost	$76,636,931 00
	Cost per H.P.	$ 197 00

CASE II.—If 15,000 c.f.s. are used, and the recommendations in paragraphs 6 to 23 inclusive are adopted, we estimate the cost will be as follows:

(A)	Amount of H.P.	258,000
	Number of Units	5
	Total Cost	$60,862,892 00
	Cost per H.P.	$ 235 90
	Time of Completion	January 1, 1923
(B)	Amount of H.P.	389,000
	Number of Units	9
	Total Cost	$72,216,635 00
	Cost per H.P.	$ 185 65

24. AVAILABLE WATER.—We are not advised as to how the Commission will procure the above 15,000 c.f.s., and the above costs per horsepower assume that the necessary 15,000 c.f.s. are obtained without expense.

We have suggested in paragraph 2, the acquisition of the Canadian Niagara Power Company by the Commission. Should this be accomplished, the necessary 15,000 c.f.s. would be available.

The arrangement we have in mind would provide for the furnishing to the Canadian Niagara Power Company of the amount of dependable power they now receive from the use of this 8,225 c.f.s., less an amount of power that equals the existing costs of operation and shutdowns due to ice.

The Canadian Niagara Power Company plant was unfortunately designed in the beginning, as was generally believed at the time the plan was adopted, and as has been continuously proven throughout its operating existence to date, and this fact should be taken actively into consideration when the amount of positive dependable power the Canadian Niagara Power Company would receive is being determined. Each winter season of its operation it has suffered marked interruption from ice trouble, and recently these interruptions have been as high as 40% of the total capacity.

If the foregoing arrangement is effected, the units in the Canadian Niagara Power Company plant thus made idle could be kept in reserve for future emergency use.

If the additional 8,225 c.f.s. are obtained as recommended above, and the compensation therefor is effected as suggested, then the amount of power mentioned in Cases I and II should be reduced by 80,000 H.P., thus producing costs per H.P. as follows:

CASE I.—	
For 9 Units	$248 00 per H.P.
CASE II.—	
For 9 Units	$233 71 per H.P.

25. CASE III.—If 20,000 c.f.s. are used and the recommendations mentioned in paragraphs 6 to 23 inclusive, are adopted, we estimate the cost to be as follows:

(A)	Amount of H.P.	311,000
	Number of Units	6
	Total Cost	$71,988,626 00
	Cost per H.P.	$ 231 47
	Time of Completion	January 1st, 1923
(B)	Amount of H.P.	549,000
	Number of Units	12
	Total Cost	$88,930,506 00
	Cost per H.P.	$ 162 00

If 20,000 c.f.s. are obtained in the manner recommended in paragraph 2, and the power compensated for as suggested in paragraph 24, then the total available power in Case III, (B) will be reduced by that amount, or as follows:

(B) 549,000 H.P. minus 80,000 H.P. equals 469,000 H.P. Therefore, the unit cost becomes:

(B) 469,000 H.P. @ $189.61 per H.P.

26. The foregoing figures show by way of justification of enlargement of the plant to 20,000 c.f.s. that you will secure 469,000 H.P. at a cost of $58.39 per H.P. less than by using 15,000 c.f.s. It will be observed that this great saving is accomplished by a full compensation to existing interests at Niagara Falls, and at the same time there is yielded for the benefit of the Ontario consumers their much needed power supply at a cost not to exceed 30% of the cost by steam, even if steam were available.

27. In conclusion we wish to extend to your entire organization our appreciation of the aid they have given us in the work preceding this report. Investigations and reports of this character are always an annoyance to any organization. Mr. Acres and all his men have provided for our needs in a spirit of co-operation that was as unusual as it was welcome.

Yours very truly,

REPORT

ON

CHIPPAWA HYDRO-ELECTRIC PROJECT

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

COST ESTIMATES

HUGH L. COOPER & CO.
Consulting Engineers
101 Park Avenue
New York City

August 7, 1920

EXPLANATION

This report covers six different cost estimates, each of which is to be indentified by its special serial number.

CASE I. Estimate of cost of Project as designed by the Hydro-Electric Power Commission Engineers wherein Hugh L. Cooper & Company's quantities and unit prices have been applied.
Quantity of water, 15,000 c.f.s.

CASE II. Estimate of cost of Project wherein Hugh L. Cooper & Company have introduced modifications in design, and applied their quantities and unit prices.
Quantity of water, 15,000 c.f.s.

CASE III. Same as Case II using 20,000 c.f.s.

The letter "C" indicates the cost to complete to January 1, 1923. This date applies to 5 and 6 units only.

The numbers 5, 6, 9 and 12 indicate the number of units.

CONTINGENCIES

Contingencies in this estimate are treated as follows:

Ten per cent. is added to the neat-line excavation quantities in earth for overcut.

Seven and one-half per cent. is added to all other quantities to provide for changes in design and contingencies.

The unit price applied to steel in the penstocks is $225.00 per ton. The tonnage includes an excess of 10 per cent. for the first 100 feet in elevation drop beginning at the forebay and 15 per cent. allowance for the remainder. These percentages are exclusive of the seven and one-half per cent. mentioned above.

Niagara Development

Hydro-Electric Power Commission of Ontario

Estimate 1-C-5

(A) INTAKE

COFFERDAM				
Steel Sheet Piling	2,902½	tons @	$125.00	$ 362,812 50
Fill	188,125	c. y. @	1.20	225,750 00
Pumping				50,000 00
EXCAVATION				
Earth Excavation	380,550	c. y. @	.65	247,357 50
Rock Excavation	21,500	c. y. @	3.50	75,250 00
MASONRY				
Concrete, plain	50.525	c. y. @	15.00	757,875.00
Concrete, reinforced	34,400	c. y. @	40.00	1,376,000.00
STRUCTURAL STEEL				
Gate Beams	223,063	lbs. @	.10	22,306.30
MISCELLANEOUS				
C. I Spacers	118,250	lbs. @	.15	17,737.50
Gantry Crane				15,000.00
Two Lock Gates and Oper. Mach.				100,000.00
Fill, Earth	169,850	c. y. @	.60	101,910.00
Rip, Rap	7.095	c. y. @	1.00	7,095.00
Total				$3,359,093.80

(B) WELLAND RIVER

Earth Excavation	2,541,073	c. y.	@	$ .70	$1,778,751 10
Rip Rap	26,875	c. y.	@	1.00	26,875.00
Concrete	1,613	c. y.	@	16.00	25,808.00
Total					$1,831,434 10

(C) POWER CANAL

CANAL EARTH SECTION					
Earth Excavation	2,441,201	c. y.	@	$ 1.10	$2,685,321 00
Rock Excavation	77,726	c. y.	@	3.50	272,041 00
Rock Lining	465,690	c. y.	@	.15	69,853.50
Concrete	29,563	c. y.	@	14.00	413,882.00
Total					$3,441,097.60
CONTROL WORKS					
Rock Excavation	430	c. y.	@	5.50	2,365 00
Concrete, reinforced	1,828	c. y.	@	40.00	73,120.00
Gate with Rollers, Steel	240,800	lbs.	@	.10	24,080.00
Gate Operating Machinery	107,500	lbs.	@	.40	43,000,00
Bridge over Canal					25,000.00
Total					167,565.00
CANAL ROCK SECTION					
Earth Excavation	3,011,036	c. y.	@	1.10	3,312,139.60
Rock Excavation	2,939,365	c. y.	@	3.50	10,287,777 50
Rock Fill	1,149,498	c. y.	@	.15	172,424.70
Concrete in Walls	50,525	c. y.	@	14.00	707,350.00
Concrete in Lining	285,090	c. y.	@	14.00	3,991,260.00
Concrete in Whirlpool	49,772	c. y.	@	14.00	696,808 00
Anchor Rods, Steel	681,550	lbs.	@	.20	136,310.00
Total					19,304,069.80
Canal Earth Section					3,441,097.60
Control Works					167,565.00
Canal Rock Section					19,304,069.80
Total Canal					$22,912,732.40

(D) FOREBAY

Earth Excavation					Completed
Rock Excavation					Completed
Concrete Lining	23.220	c. y.	@	14.00	325,080.00
Concrete Walls	3,978	c. y.	@	14.00	55,692.00
Anchor Rods, Steel	23,650	lbs.	@	.20	4,730.00
Total					$385,502.00

(E) SCREEN HOUSE

SUBSTRUCTURE					
Earth Excavation					Completed
Rock Excavation					Completed
Concrete, reinforced	26,810	c. y.	@	$ 40.00	$1,072,400.00
Structural Steel in Racks	323,575	lbs.	@	.075	24,268.13
Structural Steel in Gates	1,088,233	lbs.	@	.075	81,617.48
Structural Steel in Checks	437,525	lbs.	@	.10	43,752.50
Ice Chute Gate and Rig					25,000.00
Rock Fill	5,483	c. y.	@	1.50	8,224.50
Earth Fill	5,052	c. y.	@	3.00	15,156.00
Superstructure					237,405.00
Miscellaneous					75,000.00
Total					$1,582,823 61

(F) PENSTOCKS

Tunnel Rock Excavation	6.450	c. y.	@	$ 10.00	$ 64,500.00
Open Cut Rock Excavation	25.263	c. y.	@	3.50	88,420 50
Concrete, plain	15,588	c. y.	@	16.00	249,408.00
Concrete, reinforced	2,795	c. y.	@	40.00	111,800.00

Structural Steel	5,535,712	lbs. @	0.1125	622,767.60
Rip Rap, Wall	12,363	c. y. @	3.00	37,089 00
Total				$1,173,985.10

(G) POWER HOUSE

COFFERDAM				
Concrete, plain	4,085	c. y. @	$ 15.00	$ 61,275.00
Pumping				15,000.00
Removal Charges				45,956.00
SUBSTRUCTURE				
Rock Excavation	298,689	c. y. @	3.50	1,045,411.50
Concrete, reinforced	59,125	c. y. @	32.00	1,892,000.00
Tail Race Excavation	13,975	c. y. @	5.50	76,862 50
Superstructure				1,579,500.00
Miscellaneous				200,000.00
Emergency Fund				200,000.00
Total				$5,116,005.00

(H) HYDRAULIC EQUIPMENT

COMPLETE F.O.B.				
Queenston				$1,829,840 94
Storage, Transportation, Erection	3,000	tons @	$ 60.00	180,000.00
Total				$2,009,840,94

(I) ELECTRICAL EQUIPMENT

Complete in Place	$4,752,160.00

(J) RIGHT OF WAY

Acquired.

(K) BRIDGES

$1.534,023.82

SUMMARY

(A) INTAKE	$ 3,359,093.80
(B) WELLAND RIVER	1,831,434.10
(C) POWER CANAL	22,912,732.40
(D) FOREBAY	385,502.00
(E) SCREEN HOUSE	1,582,823.61
(F) PENSTOCKS	1,173,985.10
(G) POWER HOUSE	5,116,005.00
(H) HYDRAULIC EQUIPMENT	2,009,840.94
(I) ELECTRICAL EQUIPMENT	4,752,160.00
(J) RIGHT OF WAY	Completed
(K) BRIDGES	1,534,023 82
Total	$44,657,600.77
ENGINEERING ASD OVERHEAD 8 per cent.	3,572,608 06
Total	$ 48,230,208.83
INTEREST CHARGES	
Interest at 6½% per annum, compounded semi-annually	4,193,209.55
Total	$52,423,418.38
TOTAL DISBURSEMENTS	
To May 1st, 1920, plus interest compounded annually to January 1st, 1923	$14,000,000.00
GRAND TOTAL	$66,423,418 38

Niagara Development

Hydro-Electric Power Commission of Ontario

Estimate 1-C-9

(A) INTAKE

COFFERDAM			
Steel Sheet Piling	2,902½ tons	@ $125.00	$ 362,812.50
Fill	188,125 c. y.	@ 1.20	225,750.00
Pumping			50,000 00
EXCAVATION			
Earth Excavation	380,550 c. y.	@ .65	247,357 50
Rock Excavation	21,550 c. y.	@ 3.50	75,250 00
MASONRY			
Concrete, plain	50,525 c. y.	@ 15.00	757,875 00
Concrete, reinforced	34,400 c. y.	@ 40.00	1,376,000 00
STRUCTURAL STEEL			
Gate Beams	223,063 lbs.	@ .10	22,306 30
MISCELLANEOUS			
C.I. Spacers	118,250 lbs.	@ .15	17,737 50
Gantry Crane			15,000 00
2 Lock Gates and Oper. Machine			100,000 00
Fill, Earth	169,850 c. y.	@ $ .60	101,910 00
Rip Rap	7,095 c. y.	@ 1.00	7,095 00
Total			$3,359,093 80

(B) WELLAND RIVER

Earth Excavation	2,541,073 c. y.	@ $ .70	$ 1,778,751 10
Rip Rap	26,875 c. y.	@ 1.00	26,875 00
Concrete	1,613 c. y.	@ 16.00	25,808 00
Total			$ 1,831,434 10

(C) POWER CANAL

CANAL EARTH SECTION			
Earth Excavation	2,441,201 c. y.	@ $ 1.10	$ 2,685,321 10
Rock Excavation	77,726 c. y.	@ 3.50	272,041 00
Rock Lining	465,690 c. y.	@ .15	69,853 50
Concrete Walls	29,563 c. y.	@ 14.00	413,882 00
Total			$ 3,441,097 60
CONTROL WORKS			
Rock Excavation	430 c. y.	@ 5.50	2,365 00
Concrete, reinforced	1,828 c. y.	@ 40.00	73,120 00
Gate with Rollers, Steel	240,800 lbs.	@ .10	24,080 00
Gate Operation Machinery	107,500 lbs.	@ .40	43,000 00
Bridge over Canal			25,000 00
Total			$ 167,565 00
CANAL ROCK SECTION			
Earth Excavation	3,011,036 c. y.	@ 1.10	3,312,139 60
Rock Excavation	2,939,365 c. y.	@ 3.50	10,287,777 50
Rock Fill	1,149,498 c. y.	@ .15	172,424 70
Concrete in Walls	50,525 c. y.	@ 14.00	707,350 00
Concrete in Lining	285,090 c. y.	@ 14.00	3,991,260 00
Concrete in Whirlpool	49,772 c. y.	@ 14.00	696,080 00
Anchor rods, steel	681,550 lbs.	@ .20	136,310 00
Total			$ 19,304,069 80
Canal Earth Section			3,441,097 60
Control Works			167,565 00
Canal Rock Section			19,304,069 80
Total Canal			$ 22,912,732 40

(D) FOREBAY

Earth Excavation	Completed			
Rock Excavation	Completed			
Concrete Lining	23,220	c. y.	@ $ 14.00	$ 325,080 00
Concrete Walls	3,978	c. y.	@ 14.00	55,692 00
Anchor Rods, Steel	23,650	lbs.	@ .20	4,730 00
Total				$ 385,502 00

(E) SCREEN HOUSE

SUBSTRUCTURE				
Earth Excavation	Completed			
Rock Excavation	Completed			
Concrete, reinforced	26,810	c. y.	@ $ 40.00	$ 1,072,400 00
Structural Steel in Racks	323,575	lbs.	@ .075	24,268 13
Structural Steel in Gates	1,088,233	lbs.	@ .075	81,617 48
Structural Steel in Checks	437,525	lbs.	@ .10	43,752 50
Ice Chute and Rig				25,000 00
Rock Fill	5,483	c. y.	@ 1.50	8,224 50
Earth Fill	5,052	c. y.	@ 3.00	15,156 00
Superstructure				406,980 00
Miscellaneous				100,000 00
Total				$ 1,777,398 61

(F) PENSTOCKS

Tunnel Rock Excavation	11,126	c. y.	@ $ 10.00	$ 111,260 00
Open Cut Rock Excavation	35.475	c. y.	@ 3.50	124,162 50
Concrete, plain	26,875	c. y.	@ 16.00	430.000 00
Concrete, reinforced	2,795	c. y.	@ 40.00	111,800 00
Structural Steel	9,226,187	lbs.	@ 0.1125	1,037,946 04
Rip Rap Wall	19,135	c. y.	@ 3.00	57,405 00
Total				$ 1,872,573 54

(G) POWER HOUSE

COFFERDAM				
Concrete, plain	6,880	c. y.	@ $ 15.00	$ 103,200 00
Pumping				25,000 00
Removal Charges				77,400 00
SUBSTRUCTURE				
Rock Excavation	375,014	c. y.	@ 3.50	1,312,549 00
Concrete, reinforced	99,975	c. y.	@ 32.00	3,199,200 00
Tail Race Excavation	23,650	c. y.	@ 5.50	130,075 00
Superstructure				2,673.000 00
Miscellaneous				250.000 00
Emergency Fund				250.000 00
Total				$ 8,020,424 00

(H) HYDRAULIC EQUIPMENT

Complete, F.O.B. Queenston				$ 3,233,000 94
Storage, Transportation, Erection	5,400	tons	@ $ 60.00	324,000 00
Total				$ 3,557,000 94

(I) ELECTRICAL EQUIPMENT

Complete in Place	$ 8,417,360 00

(J) RIGHT OF WAY

Acquired

(K) BRIDGES

$ 1,534,023 82

SUMMARY

(A)	INTAKE	$ 3,359.093 80
(B)	WELLAND RIVER	1,831,434 10
(C)	POWER CANAL	22,912,732 40
(D)	FOREBAY	385.502 00
(E)	SCREEN HOUSE	1,777,398 61
(F)	PENSTOCKS	1,872,573 54
(G)	POWER HOUSE	8,020.424 00

(H) HYDRAULIC EQUIPMENT	3,557,000 94
(I) ELECTRICAL EQUIPMENT	8,417,360 00
(J) RIGHT OF WAY	Completed
(K) BRIDGES	1,534,023 82
Total	$ 53,667,543 21
ENGINEERING AND OVERHEAD 8%	4,293,403 45
Total	$ 57,960,946 66
INTEREST CHARGES	
Interest at 6½% per annum compounded semi-annually	4,675,984 34
Total	$ 62,636,931 00
TOTAL DISBURSEMENTS	
To May 1st, 1920, plus interest compounded annually to January 1st, 1923	14,000,000 00
GRAND TOTAL	$76,636,931 00

Niagara Development

Hydro-Electric Power Commission of Ontario

Estimate II-C-5

(A) INTAKE

Excavation				
Earth for Piers	18,275	c. y. @	$ .65	$ 11,878 75
Dredging	80,625	c. y. @	.45	36,281 25
Piers				
First Cost of Caissons				40,000 00
Installation of Caissons		each	$3,000.00	111,000 00
Concrete, plain	7,955	c. y. @	15.00	119,325 00
Grillage	215	M FBM	120.00	25,800 00
Booms				
Concrete, reinforced	5,237	c. y. @	40.00	209,480 00
Pontoons				
Structural Steel	268,750	lbs. @	.10	26,875 00
Painting				1,000 00
Total				$ 581,640 00

(B) WELLAND RIVER

Earth Excavation	1,373,601	c. y. @	$ .45	$ 618,120 45
Rip Rap	26,875	c. y. @	1.00	26,875 00
Total				$ 644,995 45

(C) POWER CANAL

Canal Earth Section				
Earth Excavation				
Suction Dredge	1,034,979	c. y. @	$ .45	$ 465,740 55
Dipper Dredge	330,000	c. y. @	.80	264,000 00
Steam Shovel	696,523	c. y. @	1.10	766,175 30
Rock Excavation	79,016	c. y. @	3.50	276,556 00
Rock Lining	24,940	c. y. @	.15	3,741 00
Concrete	29,563	c. y. @	14.00	413,882 00
Total				$ 2,190,094 85
Control Works				
Rock Excavation	430	c. y. @	5.50	$ 2,365 00
Concrete, reinforced	1,828	c. y. @	40.00	73,120 00
Gate with Rollers, Steel	240,800	lbs. @	.10	24,080 00
Gate Operating Machinery	107,500	lbs. @	.40	43,000 00
Bridge over Canal				25,000 00
Total				$ 167,565 00

CANAL ROCK SECTION

Earth Excavation	3,011,036	c. y. @	1.10	3,312,139 60
Rock Excavation	2,939,365	c. y. @	3.50	10,387,777 50
Rock Fill	1,149,498	c. y. @	.15	172,424 70
Concrete in Walls	50,525	c. y. @	14.00	707,350 00
Concrete in Lining	285,090	c. y. @	14.00	3,991,260 00
Concrete in Whirlpool	54,610	c. y. @	14.00	764,540 00
Anchor Rods, Steel	681,550	lbs. @	.20	136,310 00
Total				$ 19,371,801 80

ICE CHUTE

Open Cut Rock Excavation	64,500	c. y. @	5.50	354,750 00
Concrete, plain	1,290	c. y. @	20.00	25,800 00
Concrete, reinforced	1,720	c. y. @	40.00	68,800 00
Gates and Rigs				50,000 00
Total				$ 499,350 00

TESTING OF WHIRLPOOL SECTION

Concrete, plain	630	c. y. @	20.00	12,600 00
Earth Fill	21,500	c. y. @	.60	12,900 00
Pumping				10,000 00
Total				$ 35,500 00

Canal Earth Section	$ 2,190,094 85
Control Works	167,565 00
Canal Rock Section	19,371,801 80
Ice Chute	499,350 00
Testing of Whirlpool Section	35,500 00
Total Canal	$ 22,264,311 65

(D) FOREBAY

Earth Excavation			Completed	
Rock Excavation			Completed	
Concrete Lining	23,220	c. y. @	$ 14.00	$ 325,080 00
Concrete Walls	3,978	c. y. @	14.00	55,692 00
Anchor Rods, Steel	23,650	lbs. @	.20	4,730 00
Alterations in Design				225,000 00
Total				$ 610,502 00

(E) SCREEN HOUSE

SUBSTRUCTURE

Earth Excavation			Completed	
Rock Excavation			Completed	
Concrete, reinforced	26,810	c. y. @	$ 40.00	$ 1,072,400 00
Structural Steel in Racks	323,575	lbs. @	.075	24,268 13
Structural Steel in Gates	1,088,233	lbs. @	.075	81,617 48
Cast Iron Gate Seats				10,000 00
Ice Chute Gate and Rig				25,000 00
Rock Fill	5,483	c. y. @	1.50	8,224 50
Earth Fill	5,052	c. y. @	3.00	15,156 00
Superstructure				237,405 00
Miscellaneous				75,000 00
Total				$ 1,549,071 11

(F) PENSTOCKS

Tunnel Rock Excavation	6,450	c. y. @	$ 10.00	$ 64,500 00
Open Cut Rock Excavation	25,263	c. y. @	3.50	88,420 50
Concrete, plain	15,588	c. y. @	16.00	249,408 00
Concrete, reinforced	2,795	c. y. @	40.00	111,800 00
Structural Steel	5,535,712	lbs. @	0.1125	622,767 60
Rip Rap Wall	12,363	c. y. @	3.00	37,089 00
Total				$ 1,173,985 10

(G) POWER HOUSE

COFFERDAM				
Concrete, plain	4,085	c. y.	@ $ 15.00	$ 61,275 00
Pumping				15,000 00
Removal Charges				45,956 00
SUBSTRUCTURE				
Rock Excavation	298,689	c. y.	@ 3.50	1,045,411 50
Concrete, reinforced	59,125	c. y.	@ 32.00	1,892,000 00
Tail Race Excavation	13,975	c. y.	@ 5.50	76,862 50
Superstructure				1,579,500 00
Miscellaneous				200,000 00
Emergency Fund				200,000 00
Total				$ 5,116,005 00

(H) HYDRAULIC EQUIPMENT

Complete, F.O.B. Queenston				$ 1,829,840 94
Storage, Transportation, Erection	3,000	tons	@ $ 60.00	180,000 00
Total				$ 2,009,840 94

(I) ELECTRICAL EQUIPMENT

Complete in Place	$ 4,752,160 00

(J) RIGHT OF WAY

Acquired

(K) BRIDGE

$ 1,534,023 82

SUMMARY

(A)	INTAKE	$ 581,640 00
(B)	WELLAND RIVER	644,995 45
(C)	POWER CANAL	22,264,311 65
(D)	FOREBAY	610,502 00
(E)	SCREEN HOUSE	1,549,071 11
(F)	PENSTOCKS	1,173,985 10
(G)	POWER HOUSE	5,116,005 00
(H)	HYDRAULIC EQUIPMENT	2,009,840 94
(I)	ELECTRICAL EQUIPMENT	4,752,160 00
(J)	RIGHT OF WAY	Completed
(K)	BRIDGES	1,534,023 82
	Total	$ 40,236,535 07
	ENGINEERING AND OVERHEAD 8%	3,218,922 81
	Total	$ 43,455,457 88
	INTEREST CHARGES	
	Interest at 6½% per annum, compounded semi-annually	3,407,434 24
	Total	$ 46,862,892 12
	TOTAL DISBURSEMENTS	
	To May 1st, 1920, plus interest compounded annually to January 1st, 1923	14,000,000 00
	GRAND TOTAL	$ 60,862,892 12

Niagara Development

Hydro-Electric Power Commission of Ontario

Estimate II-C-9

(A) INTAKE

EXCAVATION				
Earth for Piers	18,275	c. y. @	.65	$ 11,878 75
Dredging	80,625	c. y. @	.45	36,281 25
PIERS				
First Cost of Caissons				40,000 00
Installation of Caissons		each	$3,000.00	111,000 00
Concrete, plain	7,955	c. y. @	15.00	119,325 00
Grillage	215	M FBM	120.00	25,800 00
BOOMS				
Concrete, reinforced	5,237	c. y. @	40.00	209,480 00
PONTOONS				
Structural Steel	268,750	lbs. @	.10	26,875 00
Painting				1,000 00
Total				$ 581,640 00

(B) WELLAND RIVER

Earth Excavation	2,541,073	c. y. @	$ .45	$ 1,143,482 85
Rip Rap	26,875	c. y. @	1.00	26,875 00
Total				$ 1,170,357 85

(C) POWER CANAL

CANAL EARTH SECTION				
Earth Excavation				
Suction Dredge	1,552,470	c. y. @	.45	$ 698,611 50
Dipper Dredge	330,000	c. y. @	.80	264,000 00
Steam Shovel	696,523	c. y. @	1.10	766,175 30
Rock Excavation	79,016	c. y. @	3.50	266,556 00
Rock Lining	24,940	c. y. @	.15	3,741 00
Concrete	29,563	c. y. @	14.00	413,882 00
Total				$ 2,412,965 80
CONTROL WORKS				
Rock Excavation	430	c. y. @	5.50	2,365 00
Concrete, reinforced	1,828	c. y. @	40.00	73,120 00
Gate with Rollers, Steel	240,800	lbs. @	.10	24,080 00
Gate Operating Machinery	107,500	lbs. @	.40	43,000 00
Bridge over Canal				25,000 00
Total				$ 167,565 00
CANAL ROCK SECTION				
Earth Excavation	3,011,036	c. y. @	1.10	3,312,139 60
Rock Excavation	2,939,365	c. y. @	3.50	10,287,777 50
Rock Fill	1,149,498	c. y. @	.15	172,424 70
Concrete in Walls	50,525	c. y. @	14.00	707,350 00
Concrete in Lining	285,090	c. y. @	14.00	3,991,260 00
Concrete in Whirlpool	54,610	c. y. @	14.00	764,540 00
Anchor Rods, Steel	681,550	lbs. @	.20	136,310 00
Total				$ 19,371,801 80
ICE CHUTE				
Open Cut Rock Excavation	64,500	c. y. @	5.50	354,750 00
Concrete, plain	1,290	c. y. @	20.00	25,800 00
Concrete, reinforced	1,720	c. y. @	40.00	68,800 00
Gates and Rigs				50,000 00
Total				$ 499,350 00

Item	Quantity	Unit	Rate	Amount
TESTING OF WHIRLPOOL Section				
Concrete, plain	630	c. y. @	20.00	12,600 00
Earth Fill	21,500	c. y. @	.60	12,900 00
Pumping				10,000 00
Total				$ 35,500 00
Canal Earth Section				$ 2,412,965 80
Control Works				167,565 00
Canal Rock Section				19,371,801 80
Ice Chute				499,350 00
Testing Whirlpool Section				35,500 00
Total Canal				$ 22,487,182 60

(D) FOREBAY

Item	Quantity	Unit	Rate	Amount
Earth Excavation			Completed	
Rock Excavation			Completed	
Concrete Lining	23,220	c. y. @	14.00	325,080 00
Concrete Walls	3,978	c. y. @	14.00	55,692 00
Anchor Rods, Steel	23,650	lbs. @	.20	4,730 00
Alterations in Design				225,000 00
Total				610,502 00

(E) SCREEN HOUSE

Item	Quantity	Unit	Rate	Amount
SUBSTRUCTURE				
Earth Excavation			Completed	
Rock Excavation			Completed	
Concrete, reinforced	26,810	c. y. @	40.00	$ 1,072,400 00
Structural Steel in Racks	323,575	lbs. @	.075	24,268 13
Structural Steel in Gates	1,088,233	lbs. @	.075	81,617 48
Cast Iron Gate Seats				10,000 00
Ice Chute Gate and Rig				25,000 00
Rock Fill	5,483	c. y. @	1.50	8,224 50
Earth Fill	5,052	c. y. @	3.00	15,156 00
Superstructure				406,980 00
Miscellaneous				100,000 00
Total				$1,743,646 11

(F) PENSTOCKS

Item	Quantity	Unit	Rate	Amount
Tunnel Rock Excavation	11,126	c. y. @	10.00	$ 111,260 00
Open Cut Rock	35,475	c. y. @	3.50	124,162 50
Concrete, plain	26,875	c. y. @	16.00	430,000 00
Concrete, reinforced	2,795	c. y. @	40.00	111,800 00
Structural Steel	9,226,187	lbs. @	.1125	1,037,946 04
Rip Rap, Wall	19,135	c. y. @	3.00	57,405 00
Total				$ 1,872,573 54

(G) POWER HOUSE

Item	Quantity	Unit	Rate	Amount
COFFERDAM				
Concrete, plain	6,880	c. y. @	15.00	$ 103,200 00
Pumping				25,000 00
Removal Charges				77,400 00
SUBSTRUCTURE				
Rock Excavation	375,014	c. y. @	3.50	1,312,549 00
Concrete, reinforced	99,975	c. y. @	32.00	3,199,200 00
Tail Race Excavation	23,650	c. y. @	5.50	130,075 00
Superstructure				2,673,000 00
Miscellaneous				250,000 00
Emergency Fund				250,000 00
Total				$ 8,020,424 00

(H) HYDRAULIC EQUIPMENT

Complete F.O.B. Queenston		$ 3,557,000 94
Storage, Transportation, Erection,	5,400 tons @ 60.00	324,000 00
Total		$ 3,557,000 94

(I) ELECTRICAL EQUIPMENT

Complete in Place	$ 8,417,360 00

(J) RIGHT OF WAY

Acquired

(K) BRIDGES

$ 1,534,023 82

SUMMARY

(A) INTAKE	$ 581,640 00
(B) WELLAND RIVER	1,170,357 85
(C) POWER CANAL	22,487,182 60
(D) FOREBAY	610,502 00
(E) SCREEN HOUSE	1,743,646 11
(F) PENSTOCKS	1,872,573 54
(G) POWER HOUSE	8,020,424 00
(H) HYDRAULIC EQUIPMENT	3,557,000 94
(I) ELECTRICAL EQUIPMENT	8,417,360 00
(J) RIGHT OF WAY	Completed
(K) BRIDGES	1,534,023 82
Total	$ 49,994,710 86
ENGINEERING AND OVERHEAD 8 per cent.	3,999,576 87
Total	$53,994,287 73
INTEREST CHARGES Interest at 6½% per annum compounded semi-annually	4,222,347 72
Total	$ 58,216,635 45
TOTAL DISBURSEMENTS To May 1, 1920, plus interest compounded annually to January 1, 1923	$ 14,000,000 00
GRAND TOTAL	$ 72,216,635 45

Niagara Development

Hydro-Electric Power Commission of Ontario

Estimate III-C-6

(A) INTAKE

EXCAVATION		
Earth for Piers	21,500 c. y. @ .65	$ 13,975 00
Dredging	104,275 c. y. @ .45	46,923 75
PIERS		
First Cost of Caissons		40,000,000 00
Installation of Caissons	each $3,000.00	111,000 00
Concrete, plain	8,600 c. y. @ 15.00	129,000 00
Grillage	215 M FBM 120.00	25,800 00
BOOMS		
Concrete, reinforced	5,237 c. y. @ 40.00	209,480 00
PONTOONS		
Structural Steel	268,750 lbs. @ .10	26,875 00
Painting		1,000 00
Total		$ 604,053 75

(B) WELLAND RIVER

Earth Excavation	2,804,881	c. y. @	.45	$ 1,262,196 45
Rip Rap	26,875	c. y. @	1.00	26,875 00
Total				$ 1,289,071 45

(C) POWER CANAL

Canal Earth Section

Earth Excavation				
Suction Dredge	1,498,495	c. y. @	.45	$ 674,322 75
Dipper Dredge	330,000	c. y. @	.80	264,000 00
Steam Shovel	696,523	c. y. @	1.10	766,175 30
Rock Excavation	175,977	c. y. @	3.50	615,919 50
Rock Lining	27,413	c. y. @	.15	4,111 95
Concrete	32,250	c. y. @	14.00	451,500 00
Total				$ 2,776,029 50

Control Works

Rock Excavation	457	c. y. @	5.50	2,513 50
Concrete, reinforced	1,881	c. y. @	40.00	75,240 00
Gate with Rollers, Steel	322,500	lbs. @	.10	32,250 00
Gate Oper. Machinery	139,750	lbs. @	.40	55,900 00
Bridge over Canal				25,000 00
Total				$ 190,903 50

Canal Rock Section

Earth Excavation	3,011,035	c. y. @	1.10	3,312,138 50
Rock Excavation	130,494	c. y. @	5.50	717,717 00
Rock Excavation	3,442,258	c. y. @	3.50	12,047,903 00
Rock Fill	244,025	c. y. @	.15	36,603 75
Concrete in Walls	50,525	c. y. @	14.00	707,350 00
Concrete in Lining	307,235	c. y. @	14.00	4,301,290 00
Concrete in Whirlpool	61,598	c. y. @	14.00	862,372 00
Anchor Rods, Steel	943,850	lbs. @	.20	188,770 00
Total				$ 22,174,144 25

Ice Chute

Open Cut Rock Exc.	64,500	c. y. @	5.50	354,750 00
Concrete, plain	1,290	c. y. @	20.00	25,800 00
Concrete, reinforced	1,720	c. y. @	40.00	68,800 00
Gates and Rigs				50,000 00
Total				$ 499,350 00

Testing of Whirlpool Section

Concrete, plain	788	c. y. @	20.00	15,760 00
Earth Fill	32,358	c. y. @	.60	19,414 80
Pumping				10,000 00
Total				$ 45,174 80

Canal Earth Section	$ 2,776,029 50
Control Works	190,903 50
Canal Rock Section	22,174,144 25
Ice Chute	499,350 00
Testing of Whirlpool Section	45,174 80
Total Canal	$ 25,685,602 05

(D) FOREBAY

Earth Excavation	29,025	c. y. @	1.10	$ 31,927 50
Rock Excavation	239,725	c. y. @	3.50	829,037 50
Rock Excavation	145,125	c. y. @	5.50	798,187 50
Concrete Lining	34,905	c. y. @	14.00	488,670 00
Concrete Walls	4,300	c. y. @	14.00	60,200 00
Anchor Rods, Steel	33,863	lbs. @	.20	6,772 60
Alterations in Design				225,000 00
Total				$ 604,053 75

(E) SCREEN HOUSE

SUBSTRUCTURE				
Earth Excavation	3,600	c. y. @	1.10	$ 3,960 00
Rock Excavation	14,050	c. y. @	3.50	49,175 00
Concrete, reinforced	38,808	c. y. @	40.00	1,552,320 00
Structural Steel in Racks	430,000	lbs. @	.075	32,250 00
Structural Steel in Gates	1,451,250	c. y. @	.075	108,843 75
Cast Iron Gate Seats				14,000 00
Ice Chute Gate and Rig				25,000 00
Rock Fill	7,848	c. y. @	1.50	11,772 00
Earth Fill	6,934	c. y. @	3.00	20,802 00
Superstructure				285,000 00
Miscellaneous				90,000 00
Total				$ 2,193,122 75

(F) PENSTOCKS

Tunnel Rock Excavation	7,633	c. y. @	10.00	$ 76,330 00
Open Cut Rock Excavation	24,403	c. y. @	3.50	85,410 50
Concrete, plain	18,490	c. y. @	16.00	295,840 00
Concrete, reinforced	3,763	c. y. @	40.00	150,520 00
Structural Steel	6,353,250	lbs. @	.1125	714,740 63
Rip Rap	13,975	c. y. @	3.00	41,925 00
Total				$ 1,364,766 13

Acquired

(G) POWER HOUSE

COFFERDAM				
Concrete, plain	5,160	c. y. @	15.00	$ 77,400 00
Pumping				20,000 00
Removal Charges				58,050 00
SUBSTRUCTURE				
Rock Excavation	407,963	c. y. @	3.50	1,427,870 50
Concrete, reinforced	67,725	c. y. @	32.00	2,167,200 00
Tail Race Excavation	17,200	c. y. @	5.50	94,600 00
Superstructure				1,850,000 00
Miscellaneous				215,000 00
Emergency Fund				215,000 00
Total				$ 6,125,120 50

(H) HYDRAULIC EQUIPMENT

Complete F.O.B. Queenston				$ 2,218,040 00
Storage, Transportation, Erection	3,600	tons @	60.00	216,000.00
Total				$ 2,434,040 00

(I) ELECTRICAL EQUIPMENT

Complete in Place	$ 5,668,460 00

(J) RIGHT OF WAY

Acquired

(K) BRIDGES

SUMMARY

(A) INTAKE	$ 604,053 75
(B) WELLAND RIVER	1,289,071 45
(C) POWER CANAL	25,685,602 05
(D) FOREBAY	2,449,795 10
(E) SCREEN HOUSE	2,193,122 75
(F) PENSTOCKS	1,364,766 13
(G) POWER HOUSE	6,125,120 50
(H) HYDRAULIC EQUIPMENT	2,434,040 00
(I) ELECTRICAL EQUIPMENT	5,668,460 00
(J) RIGHT OF WAY	Completed
(K) BRIDGE	1,534,023 82
Total	$ 49,348,055 55

ENGINEERING AND OVERHEAD 8 per cent.	$	3,947,844 44
Total	$	53,295,899 99
INTEREST CHARGES		
Interest at 6½% per annum compounded semi-annually		4,692,726 74
Total	$	57,988,626 73
TOTAL DISBURSEMENTS		
To May 1, 1920, plus interest compounded annually to January 1, 1923		14,000,000 00
GRAND TOTAL	$	71,988,626 73

Niagara Development

Hydro-Electric Power Commission of Ontario

Estimate III-C-12

(A) INTAKE

EXCAVATION					
Earth for Piers	21,500	c. y. @	.65	$	13,975 00
Dredging	104,275	c. y. @	.45		46,923 75
PIERS					
First Cost of Caissons					40,000 00
Installation of Caissons		each	$3,000		111,000 00
Concrete, plain	8,600	c. y. @	15.00		129,999 00
Grillage	215	M. FBM	120.00		25,800 00
BOOMS					
Concrete, reinforced	5,237	c. y. @	40.00		209,480 00
PONTOONS					
Structural Steel	268,750	lbs. @	.10		26,875 00
Painting					1,000 00
Total				$	604,053 75

(B) WELLAND RIVER

Earth Excavation	4,207,323	c. y. @	.45	$	1,893,295 35
Rip Rap	26,875	c. y. @	1.00		26,875 00
Total				$	1,920,170 35

(C) POWER CANAL

CANAL EARTH SECTION					
Earth Excavation					
Suction Dredge	2,247,742	c. y. @	.45	$	1,011,483 90
Dipper Dredge	330,000	c, y. @	.80		264,000 00
Steam Shovel	696,523	c. y. @	1.10		766,175 30
Rock Excavation	175,977	c. y. @	3.50		615,919 50
Rock Lining	27,413	c. y. @	.15		4,111 95
Concrete	32,250	c. y. @	14.00		451,500 00
CONTROL WORKS					
Total				$	3,113,190 65
Rock Excavation	457	c. y. @	5.50		2,513 50
Concrete, reinforced	1,1881	c. y. @	40.00		75,240 00
Gate with Rollers, Steel	322,500	lbs. @	.10		32,250 00
Gate Operating Machinery	139,750	lbs. @	.40		55,900 00
Bridge over Canal					25,000 00
Total				$	190,903 50
CANAL ROCK SECTION					
Earth Excavation	3,011,035	c. y. @	1.10	$	3,312,138 50
Rock Excavation	130,494	c. y. @	5.50		717,717 00
Rock Excavation	3,442,258	c. y. @	3.50		12,047,903 00
Rock Fill	244,025	c. y. @	.15		36,603 75

Concrete in Walls	50,525	c. y. @	14.00	707,350 00
Concrete in Lining	307,235	c. y. @	14.00	4,301,290 00
Concrete in Whirlpool	61,598	c. y. @	14.00	862,372 00
Anchor Rods, Steel	943,850	lbs. @	.20	188,770 00
Total				$ 22,174,144 25
ICE CHUTE				
Open Cut Rock Excavation	64,500	c. y. @	5.50	$ 354,750 00
Concrete, plain	1,290	c. y. @	20.00	25,800 00
Concrete, reinforced	1,720	c. y. @	40.00	68,800 00
Gates and Rigs				50,000 00
Total				$ 499,350 00
TEST OF WHIRLPOOL SECTION				
Concrete, plain	788	c. y. @	20.00	$ 15,760 00
Earth Fill	32,358	c. y. @	.60	19,414 80
Pumping				10.000 00
Total				$ 45,174 80
Canal Earth Section				$ 3,113,190 65
Control Works				190,903 50
Canal Rock Section				22,174,144 25
Ice Chute				499,350 00
Testing of Whirlpool Section				45,174 80
Total Canal				$ 26,022,763 20

(D) FOREBAY

Earth Excavation	29,025	c. y. @	1.10	$ 31,927 50
Rock Excavation	239,725	c. y. @	3.50	839,037 50
Rock Excavation	145,125	c. y. @	5.50	798,187 50
Concrete Lining	34,905	c. y. @	14.00	488,670 00
Concrete Walls	4,300	c. y. @	14.00	60,200 00
Anchor Rods, Steel	33,863	lbs. @	.20	6,772 60
Alterations in Design				225,000 00
Total				$ 2,449,795 10

(E) SCREEN HOUSE

SUBSTRUCTURE				
Earth Excavation	3,600	c. y. @	1.10	$ 3,960 00
Rock Excavation	14,050	c. y. @	3.50	49,175 00
Concrete, reinforced	38,808	c. y. @	40.00	1,552,320 00
Structural Steel in Racks	430,000	lbs. @	.075	32,250 00
Structural Steel in Gates	1,451,250	lbs. @	.075	108,843 75
Cast Iron Gate Seats				14,000 00
Ice Chute Gate and Rig				50,000 00
Rock Fill	7,848	c. y. @	1.50	11,772 00
Earth Fill	6,934	c. y. @	3.00	20,802 00
Superstructure				525,000 00
Miscellaneous				125,000 00
Total				$ 2,493,122 75

(F) PENSTOCKS

Tunnel Rock Excavation	15,050	c. y. @	10.00	$ 150,500 00
Open Cut Rock	47,945	c. y. @	3.50	167,807 50
Concrete, plain	36,335	c. y. @	16.00	581,360 00
Concrete, reinforced	3,763	c. y. @	40.00	150,520 00
Structural Steel	12,491,500	lbs. @	.1125	1,405,293 75
Rip Rap, Wall	26,123	c. y. @	3.00	78,369 00
Total				$ 2,533,850 25

(G) POWER HOUSE

COFFERDAM				
Concrete, plain	8,708	c. y. @	15.00	$ 130,620 00
Pumping				35,000 00

Removal Charges			97,965 00
SUBSTRUCTURE			
Rock Excavation	522,289 c. y. @	3.50	1,828,011 50
Concrete, reinforced	131,688 c. y. @	32.00	4,214,016 00
Tail Race Excavation	32,250 c. y. @	5.50	177,375 00
Superstructure			3,500,000 00
Miscellaneous			300,000 00
Emergency Fund			300,000 00
Total			$ 10,582,987 50

(H) HYDRAULIC EQUIPMENT

Complete F.O.B. Queenston			$ 4,322,780 00
Storage, Transportation, Erection	7,200 tons @	60.00	432,000 00
Total			$ 4,754,780 00

(I) ELECTRICAL EQUIPMENT

Complete in place	$ 11,166,260 00

(J) RIGHT OF WAY

Acquired

(K) BRIDGES

$ 1,534,023 82

SUMMARY

(A) INTAKE	$ 604,053 75
(B) WELLAND RIVER	1,920,170 35
(C) POWER CANAL	26,022,763 20
(D) FOREBAY	2,449,795 10
(E) SCREEN HOUSE	2,493,122 75
(F) PENSTOCKS	2,533,850 25
(G) POWER HOUSE	10,582,987 50
(H) HYDRAULIC EQUIPMENT	4,754,780 00
(I) ELECTRICAL EQUIPMENT	11,166,260 00
(J) RIGHT OF WAY	Completed
(K) BRIDGES	1,534,023 82
Total	$ 64,061,806 72
ENGINEERING AND OVERHEAD 8 per cent.	5,124,944 54
Total	$ 69,186,751 26
INTEREST CHARGES	
Interest at 6½% per annum compounded semi-annually	5,743,755 42
Total	$ 74,930,506 68
TOTAL DISBURSEMENTS	
To May 1st, 1920, plus interest compounded annually to January 1st, 1923	14,000,000 00
GRAND TOTAL	$ 88,930,506 68

CORRESPONDENCE

OF

HUGH L. COOPER AND CO.

101 Park Ave.
New York

-RE-

QUEENSTON-CHIPPAWA DEVELOPMENT

July 6, 1920.

101 Park Ave.,
Hugh L. Cooper & Co., New York, N. Y.,
May 1, 1920.

Mr. H. G. Acres,
Hydro-Electric Commission,
190 University Ave.,
Toronto, Canada.

Dear Sir:—

With respect to the engineering work that we are to perform for you relating to your Chippawa plant, it will be well at this time to convey to you our understanding of the scope of this work in order that you may either approve this understanding or modify it as you desire. We are to make an examination and report on the project as follows:

1. We are to report on the capacity of the canal, intake system, forebay and penstocks, and power house, having in mind also such future changes of levels at the intake as will probably result from modifications of the present treaty between Great Britain and the United States regarding the final quantity of water that may be diverted at Niagara Falls for power purposes. Under this instruction we will express our views as to the practicability of the design you are building and its efficiency for the best use of 15,000 c.f.s. of water plus a minor allowance of 500 c.f.s. for debris disposal.
2. We are to make a general check as to the strength and suitability of all the permanent structures enumerated in No. 1.
3. We are to make such general surveys and measurements as will enable us to check your regular monthly estimates as to the accuracy and as to the amount of completed work on permanent structures at the time of our report. The extent of these measurements will be limited to the amount of work we find necessary to enable us to make a safe certificate respecting the same.
4. We are to make a general report on the construction organization which report will include comments on the handling of the work up to date and recommendations as to the installation of additional machinery for the balance of the work, having in view the present high costs of labor and materials.
5. We are to make an estimate of the time that will probably be required to place one unit and five units in commercial operation.
6. We are to make an estimate as to the amount of money that will be needed to complete the plant up to five unit basis, and we will be guided in this estimate by the results obtained from Paragraph 3.
7. We are to make such general investigations of your accounting system as to enable us to certify as to its efficiency and reliability.
8. In making up our cost estimates we will use your figures for the cost of all real estate required.

Would you kindly advise me here as to the correctness of the foregoing at your convenience and oblige.

Yours very truly,
(Signed) Hugh L. Cooper.

APPENDIX "D"

Appendix "D" in the original report consists of prints of the following plans and drawings, etc., prepared by Hugh L. Cooper & Company, Consulting Engineers, 101 Park Avenue, New York:—

DRAWING NO.	TITLE	DATE
3438	Hydro-Electric Power Commission of Ontario; Chippawa Hydro-Electric Project, location Map.	August 16, 1920.
3439	Hydro-Electric Power Commission of Ontario; Chippawa Hydro-Electric Project, Excavation Progress Chart of May 1st, 1920.	August 16, 1920.
3440	Hydro-Electric Power Commission of Ontario; Chippawa Hydro-Electric Project. Chart showing comparative cost of ultimate installations.	August 16, 1920.
3441	Hydro-Electric Power Commission of Ontario; Chippawa Hydro-Electric Project. Drawing showing comparative cost of initial installations.	August 16, 1920.

Hugh L. Cooper & Co.,
101 Park Avenue,
New York.

July 6, 1920.

Sir Adam Beck, Chairman,
Hydro-Electric Power Commission,
Toronto, Canada.

Sir:—

With respect to the probable time when two units of the Chippawa plant can be made available for commercial operation.

You have given me a complete outline of your future construction program and with this program I am in accord. If you carry out this program you should have the two Wellman-Seaver-Morgan units (50,000 H.P. each) ready for commercial operation October 1st, 1921.

With respect to the probable cost of the works as now designed we are in substantial agreement with the figures you have recently submitted to the Provincial Government.

Yours truly,

Hugh L. Cooper & Co. (*typed*)

New York.

October 4, 1920.

Col. Sir Adam Beck,
Chairman, Hydro-Electric Power commission,
Toronto, Canada.

Dear Sir:—

On September 16th you advised me to withhold the filing of our final report until after a final conference was held between the undersigned and your engineers and certain arbitrators, not named, whom you proposed to call in, all for the purpose of making an attempt to harmonize the differences in the engineering views held by the undersigned and the engineers of the Hydro-Electric Power Commission.

It was my understanding that this conference would be held not later than the last of September, and I have been holding myself here in New York for ten days for this work. In order that I may plan my work so that I may be available for this conference, will you kindly let me know when it is to take place?

Hoping, as I do, that this meeting will be of great benefit to the Province of Ontario, I trust you will not misunderstand my urgency when I request you to have the conference at as early a date as possible, and have stenographic records kept of all the views expressed at that time.

Very truly yours,
(*Sgd.*) Hugh L. Cooper.

Hugh L. Cooper & Co.,
101 Park Avenue.
New York.

Mr. W. R. Pope, Secretary,
Hydro-Electric Power Commission,
190 University Ave.,
Toronto, Canada.

Dear Sir:—

We beg to hand you herewith by special messenger three complete copies of our final report on your Chippawa project.

Yours very truly,
(*Sgd.*) Hugh L. Cooper & Co.

Hugh L. Cooper & Co.,
101 Park Avenue.
New York.

May 1, 1920.

Mr. H. G. Acres,
Hydro-Electric Commission,
190 University Ave.,
Toronto, Canada.

Dear Sir:—

With respect to the engineering work that we are to perform for you relating to your Chippawa plant, it will be well at this time to convey to you our understanding of the scope of this work in order that you may either approve this understanding or modify it as you desire. We are to make an examination and report on the project as follows:

1. We are to report on the capacity of the canal, intake system, forebay and penstocks, and power house, having in mind also such future changes of levels at the intake as will probably result from modifications of the present treaty between Great Britain and the United States regarding the final quantity of water that may be diverted at Niagara Falls for power purposes. Under this instruction we will express our views as to the practicability of the design you are building and its efficiency for the best use of 15,000 c.f.s. of water plus a minor allowance of 500 c.f.s. for debris disposal.
2. We are to make a general check as to the strength and suitability of all the permanent structures enumerated in No. 1.
3. We are to make such general surveys and measurements as will enable us to check your regular monthly estimates as to the accuracy and as to the amount of completed work on permanent structures at the time of our report. The extent of these measurements will be limited to the amount of work we find necessary to enable us to make a safe certificate respecting the same.
4. We are to make a general report on the construction organization which report will include comments on the handling of the work up to date and recommendations as to the installation of additional machinery for the balance of the work, having in view the present high costs of labor and materials.
5. We are to make an estimate of the time that will probably be required to place one unit and five units in commerical operation.
6. We are to make an estimate as to the amount of money that will be needed to complete the plant up to five unit basis, and we will be guided in this estimate by the results obtained from Paragraph 3.
7. We are to make such general investigations of your accounting system as to enable us to certify as to its efficiency and reliability.
8. In making up our cost estimates we will use your figures for the cost of all real estate required.

Will you kindly advise me here as to the correctness of the foregoing at your convenience and oblige.

Yours very truly,

(*Sgd.*) Hugh L. Cooper.

REPORT OF

FRANCIS LEE STUART

AND

REPORT OF

H. S. KERBAUGH

-RE-

QUEENSTON-CHIPPAWA POWER DEVELOPMENT

September 30, 1920

FRANCIS LEE STUART,
Consulting Engineer,
50 East 42nd Street

September 30, 1920.

SIR ADAM BECK, Chairman,
Hydro-Electric Power Commission,
190 University Avenue,
Toronto, Ontario.

Dear Sir:

We submit herewith our joint report on the Chippawa-Queenston Development, on the Niagara River, as of September 30, 1920, and also enclose you our individual bills.

Yours truly,
(Sgd.) FRANCIS LEE STUART.
(Sgd.) H. S. KERBAUGH.

FRANCIS LEE STUART,
Consulting Engineer,
50 East 42nd Street, New York, N.Y.

September 30, 1920.

SIR ADAM BECK, Chairman,
Hydro-Electric Power Commission,
190 University Avenue,
Toronto, Ontario.

Dear Sir:

In compliance with your request that we make an inspection of your construction equipment and methods at Chippawa-Queenston Development on the Niagara River and to advise you of our opinion and conclusions on the following features of the undertaking, to wit:

1st—Suitability of the plant for the construction programme proposed,
2nd—Possible dates of completion of the canal for Generation of Power by the 1st and 2nd units at power house,
3rd—Probable cost to complete;

we have visited the work and in conference with your Engineering and Construction Staff have personally examined into the construction features of the work; have considered details of the equipment, its past performances and suitability for the service required, and given due weight to other features which have bearing on the questions involved, and we report to you as follows:

INTAKE

To provide maximum protection, duplicate intakes of widely different characteristics are planned; each of these to be operated independently and either capable of supplying the canal with water up to 15,000 c.f.s. The plans provide for the construction of an improved boom type of intake with adjustable gates, supplemented by the addition of pipe intakes to work independently or as auxiliary intakes for improving the performance of the boom intake during the worst winter conditions in the Niagara River.

These auxiliary intakes have been designed and tested out in model forms by members of your staff familiar with winter conditions in the Niagara River and in our opinion their reasoning and conclusions from the model tests warrant the proposed type of construction.

We find dredging work for this section well under way and that the boom section of the intake is scheduled for completion in the Fall of 1921, before ice begins to form. The construction of the intake is not a controlling factor in any of the schedules of completion of the work, as enough water can be drawn through the lower channel around Hogg Island for the 1st and 2nd Turbine Units, without interference with the completion of, or help from, the intake proper.

WELLAND RIVER SECTION.

This work is not a governing feature of the proposed schedule. There is at present flow area enough in this portion of the Welland River to provide the power canal with enough water for the 1st and 2nd Units. The work of enlarging this section of the River, for 15,000 c.f.s., can proceed as needed for commercial requirements, and such enlargement can be made by the present cable equipment now in use until dredge equipment is available.

GATE HOUSE.

There are 25,000 cu. yds. of concrete to place, some of which could be placed this fall and the balance after March 15, 1921, completing by the end of July, 1921.

PENSTOCKS.

Penstocks have been contracted for, completely erected by June 1st, 1921, and we see no reason why such schedule cannot be maintained.

POWER HOUSE.

The schedule provides for Ice Run, Service Gates, No. 1 Unit complete, and part of No. 2 Unit complete. Excavation for Power House will be complete October 15, 1920. 15,000 cu. yds. of concrete should be in place for start of erection of two units, No. 1 and No. 2, December 20th, 1920. It is expected to start concreting September 25th, and place the necessary amount by December 1st.

The scroll case of No. 1 Unit should be erected by January 1st. After the erection of this scroll case, a similar scroll case for Unit No. 2 should be erected and then about 10,000 cu. yds. of concrete placed in both scroll cases, in the Spring of 1921.

The erecting bay will be ready December 1st. The first generator is to be ready for shipment December 1st, 1920, and it will take four months for erection after arrival—say erected by May 15th. In the meantime the erection of the turbine and placing of concrete around the scroll case will have been completed.

POWER CANAL.

The construction of power canal section from the Welland River to the Gate House at north end of canal requires the excavating of 4,760,000 cu. yds. of earth; 2,669,000 cu. yds. of rock and placing of 200,000 cu. yds. of concrete lining and 120,000 cu. yds. of concrete walls, etc.

For purposes of this report this section can be sub-divided into three divisions:

1st—From Welland River to M.C.R.R. Bridge, Sta. O, to Sta. 10, exclusively an earth section.

2nd—From M.C.R.R. Bridge Sta. 10 to Control Works Sta. 45, exclusively an earth section.

3rd—From Control Works Sta. 45 to Gate House Sta. 460, which includes all of the rock section of the Canal.

POWER CANAL FROM WELLAND RIVER TO M.C.R.R. BRIDGE.

This work is not a controlling feature of the schedule. There are 326,000 cu. yds. of earth still to excavate for 15,000 c.f.s. The present shovel working in this division should have excavated a cross-section large enough to provide 3,000 c.f.s. required for Units No. 1 and No. 2 early next spring and if necessary a dredge could help finish completing full cross-section for 15,000 c.f.s. by August, 1921.

POWER CANAL FROM M.C.R.R. BRIDGE STA. 10, TO CONTROL WORKS STA. 45.

This division is exclusively one of earth excavation and requires for 3,000 c.f.s. with a velocity of 2½ ft. per second for Units No. 1 and No. 2, the excavation of 900,000 cu. yds. of earth, or for the full cross-section required for 15,000 c.f.s. the excavation of 1,060,000 cu. yds. of earth. For Scheduling effect it is herein considered with the Rock Division from Sta. 10 to Sta. 460.

ROCK SECTION—POWER CANAL FROM CONTROL WORKS STA. 45 TO GATE HOUSE STA. 460.

This Division requires from September 1st, 1920, the excavation of 3,373,600 cu. yds. of earth and 2,669,000 cu. yds. of rock and placing of 40,000 lineal feet of side and bottom lining in the canal, consisting of 200,000 cu. yds. of concrete and 120,000 cu. yds. of concrete in Control Works, Transition Section, and Walls.

It is the controlling feature in the completion of the entire Development for production of power at any given date and the essential requirement of the problem is to entirely complete the rock excavation in the bottom of the cut between Sta. 45 and Sta. 290 in time to permit the completion of the concrete lining by any date fixed for turning the water into the canal.

At the summit near Lundy's Lane the work has an extreme depth of cut of 140 feet of which the bottom 84 feet is solid rock and the balance earth of varying character.

From Sta. 105 to Sta. 240 there is an overburden of 1,861,000 cu. yds. of earth which has to be excavated before the great mass of rock section involved between these stations can be completely covered with plant. Similarly from Sta. 45 to Sta. 105 there is an overburden of earth above the rock of 1,434,000 cu. yds. which has to be moved in time to complete the Rock Section and its lining.

Your organization has prepared a schedule for completion of the power canal, in the same way as the schedules for the other features of the work have been prepared, and we have gone over this programme in detail considering each item of equipment and output estimated.

We find there are now available for the power canal work above, three shovel units of 225-B type, with 8-yard dippers, capable of loading on a track 63 feet above the bottom of its cut, and that two more units of the same type will be in operation in October and November respectively. There are also available three shovel units of 103-C type, with 4-yard dippers, and one Atlantic type, 2½ yard dipper unit.

From past performances of the various units on this work there has been deduced an expected yardage per unit in earth and rock in summer and winter and these factors have been used to schedule the completion of the rock and earth excavation required.

These factors are based on average output per unit and include work delays, etc.

	Double Shift Basis.	
225-B Type, 8 yd. shovel	Earth	120,000
	Rock	60,000
103-C Type, 4 yd. shovel	Earth	80,000
	Rock	35,000
Atlantic Type	Earth	50,000

Using these factors we find the programme to complete entire excavation of earth and rock required so that concrete can be completed in time to turn water in the canal by November 1st, feasible if certain additional cars and locomotives are made to the present plant.

SCHEDULE OF APPROXIMATE OUTPUT OF SHOVELS REQUIRED PER MONTH IN EARTH AND ROCK TO COMPLETE FOR GENERATING POWER NOVEMBER 1, 1921.

	Earth cu. yds.	Rock cu. yds	Total cu. yds.
September	298,000	82,000	380,000
October	498,000	116,000	614,000
November	628,000	140,000	768,000
December	498,000	140,000	638,000
January	398,000	136,000	534,000
February	308,000	226,000	534,000
March	308,000	226,000	534,000
April	297,000	269,000	566,000
May	248,000	274,000	522,000
June	283,000	266,000	549,000
July	293,000	261,000	554,000
August	293,000	270,000	563,000
September	293,000	270,000	563,000
October	146,000	40,000	186,000
	4,789,000	2,716,000	7,505,000

The concrete schedule of 200,000 cubic yards of lining of canal and 120,000 cubic yards of concrete in Control Works, Transition sections, and Walls, requires a schedule which will place the concrete as close behind the units which excavate the sections to receive the lining as it is practical to work. On account of the lateness of the season most of the concrete will have to be put in in 1921.

The magnitude of the work precludes the work being done with separate mixing units and we approve the plan of central plants for mixing the concrete. with bucket distribution in cars as needed, and recommend the plant as proposed and that all concrete that can be placed this fall be completed to help out next spring's programme.

CRUSHER PLANTS

In special reference to your request that we consider the crushing plant requirements for broken stone for concrete and the possibility of crushing a still larger quantity for the general good of the Province, as cheap stone for highway or other public purposes; we find the rock is an excellent quality of limestone. The expenditure for stripping, blasting, digging, loading into cars, and transportation to a disposal point having been made in the course of the work of providing the power canal, the cost of actually crushing for other purposes is but a small portion of the cost or value of such stone for public use.

We consider that it would be of great lasting public benefit and profit if all the available stone were crushed and some broad policy adopted on the basis "We will help you if you try to help yourself," by which this cheaply-produced broken stone of the power canal can be made to give an impetus to the "Good Roads" movement, throughout the country roads of the Province of Ontario.

The field of usefulness is a large one by rail distributing of barges loaded from the canal construction tracks near Queenston.

We estimate that it is possible to provide by the conservation methods proposed about 4,600,000 tons of broken stone, which can be sold for public purposes, under current market prices, and yet give the Power Canal a credit from the sale thereof of some $2,600,000.00 and reduce the net cost of the undertaking.

The present crusher plant, with certain small additions, can crush about 2,500 cubic yards per day. We recommend that you have installed another crushing plant of 4,000 cubic yards per day capacity near the centre of your work and in such location that a rock dump can be established for all excess rock excavated that it is not possible to crush without delay to shovels, and which by storing near the crusher plant, can be crushed afterwards as needed with slight additional expense.

PLANT YET TO BE RECEIVED.

Additional Plant proposed and yet to be purchased to carry out schedule discussed herein for production of power Nov. 1st, 1921.

Additional plant required for the two large units now being installed October and November, 1920, for completion November 1st, 1921.

LOCOMOTIVES: On hand and ordered 42; Required 47. To be provided from other work 3, leaving 2 new locomotives to be purchased at $35,000....................................	$70,000.00
CARS: 20-Yard capacity, on hand 280; Required 318, leaving 38 new cars to be purchased at $5,500..............................	209,000.00
CRUSHER: 1 No. 7½ McCully Crusher delivered and installed for changes to existing crusher plant, moving track back 5 feet and changing slightly, and an additional unloading track—to give 2,500 cubic yards capacity per day................................	40,000.00
	$319,000.00
ADDITIONAL CRUSHER PLANT: We recommend the installation of a complete crusher plant of 4,000 cubic yards per day.....	350,000.00
TOTAL........................	$669,000.00

EQUIPMENT.

Our inspection of your present equipment and its performance on the work indicates that sound judgment has been used in its selection for the construction involved and particularly so in having provided the 325 ton shovels with 8-yard dippers for work in the canal, and modern standard gauge equipment for transportation needs. The proposed additions to the present equipment are necessary and we recommend their purchase.

ESTIMATE OF COST

With the aid of your staff and based on the cost data of the work, we estimate the cost to complete the power canal and installation of five (5) Hydro-Electric Units 250,000 H.P. and the first stage of the ultimate intake construction as follows.

Section	Cost to Aug. 26, '20	Remaining Cost	Grand Total
1—Intake	$259,578	$1,340,003	$1,599,581
2—Welland River	387,568	974,823	1,362,391
3 and 3A—Canal	7,071,023	16,294,033	23,365,056
4—Forebay	794,154	116,000	910,154
5—Screen House	97,794	976,300	1,074,094
6—Penstocks	38,828	$1,052,310	$1,091,138
7—Power House	437,701	1,560,000	1,997,701
8—Hydraulic Mach'y		1,646,000	1,646,000
9—Right-of-way	1,000,000	....	1,000,000
Miscellaneous		200,000	200,000
Bridges	909,000	1,091,000	2,000,000
	$10,995,646	$25,250,469	$36,246,115
	Contingencies	10%......	3,624,611

Total Net Cost.....	39,870,726
Estimate of Cost of Superstructure and Electrical Equipment up to L.T. Bus.....................	5,301,033
Estimated residue value of Plant and Stores on hand to finish..................................	4,700,000
Total Investment......	$49,871,759
Less: Possible Salvage Recoverable......$4,000,000 Receipts from Broken Stone.......2,600,000	6,600,000
Total Net Investment	$43,271,759
Total Cost per H.P.	$ 173.08
The ultimate capacity of present plans contemplates the full use of 15,000 c.f.s., and the installation of a total of nine (9) Units producing 450,000 H.P., and will require when installed, $9,000,000 additional capital, making a total estimated cost of	$52,271,759.00
Total Cost per H.P.	116.16

In the above estimate we have generally figured on basic prices of earth excavation 70c. per cu. yd.; rock excavation $2.70 per cu. yd.; plain concrete $14.50 per cu. yd.; and reinforced concrete $25.00 per cu. yd.

NOTES: Total expenditure to end of August, 1920, is $23,268,067.93. Of this total $10,995,646.00 is shown above as being the actual total cost to August 26, 1920, of the permanent work done on the project. This cost carries its full proportion of charges including interest, plant, depreciation and general overhead.

The balance of the total expenditure to end of August, 1920, amounting to $12,272,421.93, is partly included in the items making up the remaining costs of $25,250,469.00 and partly in the item of $5,301,033.00 making up the cost of superstructure and electrical equipment, and finally in the estimate on Sheet 10 following, covering the total cost of the ultimate installation.

SCHEDULED FOR COMPLETION SEPT 1st., 1921.

In reply to your enquiry as to possibility of generating current Sept. 1st, 1921, we find that with the plant provided and proposed for completion Nov. 1st, 1921, and a further addition of 21" hydraulic Dredge Unit to begin work by or before Jan. 1st, 1921, it is feasible to generate power by Sept. 1st, 1921.

Our programme would be to dig the dredge in from a point north of the Montrose Swing Bridge over the Welland River and have it excavate the earth from Sta. 10 to Sta. 56, thereby releasing shovels scheduled for this work for such intensive work in rock sections, that water can be turned into power house, Sept. 1st, 1921.

POSSIBILITY OF INCREASING THE CAPACITY OF THE CANAL.

The canal has three chief characteristics; First, the Welland River; Second, an Earth Section; Third, a Rock Section overburdened by the earth.

The Welland River section has a limitation of capacity of 20,000 c.f.s. near its mouth, but its present capacity can be increased up to such limitation of 22,000 c.f.s., as and when desired. The Earth Section, likewise, can also be increased up to 22,000 c.f.s. capacity as required, but the Rock Section when once excavated, lined and in use, cannot be so enlarged.

The Rock Section, however, lends itself in an economical manner to an increase in carrying capacity while still in its present incompleted state by simply deepening the rock cut without any further work on the over-burden of earth, bridges, etc. The river and earth sections can be enlarged with dredge as required at any future date, and immediate provision for the proposed increased capacity of 7,000 c.f.s. would only require the deepening of bottom of the rock section between Stations 45 and 450 about fifteen feet, requiring the excavation of 1,200,000 cu. yds. of additional rock and the placing of 75,000 cu. yds. of additional concrete lining.

The present and proposed plant with the Hydraulic Dredge Unit referred to in "Schedule to complete Sept. 1st, 1921," supplemented with an additional shovel unit and extra concrete plant, will make it possible for all the necessary work to be completed in the deepened rock section in time for power to be generated by Dec. 31st, 1921, at an additional cost of $4,900,000.00 for such additional rock excavation and concrete less $1,200,000.00 which would be recovered from the additional broken stone produced, or a net cost of $3,700,000.00.

A comparative estimate of the capital required for the various stages of the undertaking with rock section of the power canal deepened for the ultimate use of 22,000 c.f.s., is as follows:

Based on the present plans of five (5) Units for partial use of 15,000 c.f.s., will give 250,000 H.P. at an estimated cost of	$43,271,759.00
Estimated Net Cost to deepen Rock Section less receipts for broken stone	3,700,000.00
	$46,971,759.00

or Total Cost per H.P., 15,000 c.f.s. capacity..........	$173.08
Total Cost per H.P., 22,000 c.f.s. capacity..........	$187.89
The ultimate capacity of present plans contemplates the full use of 15,000 c.f.s., and the installation of a total of nine (9) Units, producing 450,000 H.P., and will require when installed, $9,000,000 additional capital, making a total estimated cost of....................	$52,271,759.00
Estimated Net Cost to deepen Rock Section less receipt. from broken stone..............................	$3,700,000.00
	$55,971,759.00
or Total Cost per H.P., 15,000 c.f.s. capacity..........	$116.16
Total Cost per H.P., 22,000 c.f.s. capacity............	$124.38
Increasing the capacity of the canal as a whole to 22,000 c.f.s. and putting in operation a total of twelve (12) Units, producing 660,000 H.P., will add $11,900,000 to the above cost of Nine (9) Units, making a total estimated cost of..	$67,871,759.00
or Total Cost per H.P.	$102.83

Comparison of cost per H.P. of various capacities until ultimate capacity of development is reached:

	15,000 c.f.s. Total Cap. 450,000 H.P.	22,000 c.f.s. Total Cap. 660,000 H.P.
250,000 H.P.	$173.08 per H.P.	$187.89 per H.P.
450,000 H.P.	116.16 per H.P.	124.38 per H.P.
660,000 H.P.	....	102.82 per H.P.

In general we wish to advise you: first, that while this is a large undertaking it is in excellent shape for early completion; second, that all unknown conditions and uncertainties of construction have been eliminated; third, that the equipment is suitable; fourth, that we think that the peak of inefficiency of labour and the peak of prices of material and labour have been reached; and fifth, that with no unusual labour conditions, and with materials properly supplied, we consider the estimates of cost and dates of completion as feasible and dependable.

The project and its purposes appeal to us in all its phases. The conception and design is simple and effective and the construction work is being carried out with proper present day equipment and in an intelligent, capable way, with credit to all concerned.

Yours truly,
(Sgd.) Francis Lee Stuart.
(Sgd.) H. S. Kerbaugh.

H. S. KERBAUGH,
Room 817, City Investing Bldg.,
165 Broadway,

New York, Oct. 2nd, 1920.

Sir Adam Beck, Chairman,
Hydro-Electric Power Commission, Toronto, Canada.

Dear Sir:

In answer to your inquiry on the occasion of my recent visit to Niagara Falls, I may say that as a contractor I am willing to contract for the work covered in the report submitted to you by Mr. Stuart and myself, at the unit prices mentioned therein. I would further undertake with the plant and recommended additional to that now on the work and on order to place the first two 55,000 H.P. units in operation on any of the specific dates mentioned in our report, which you might decide to elect.

Should your decision require the dredging unit referred to in the report submitted, I am willing to furnish the dredge and undertake the work for both the canal and river at the prices named in the report, and to finish within the time named.

Yours truly,
(Sgd.) H. S. Kerbaugh.

H. S. KERBAUGH,
Room 817, City Investing Bldg.,
165 Broadway,
New York, September 20, 1920.

Sir Adam Beck, Chairman,
Hydro-Electric Power Commission, Toronto, Canada.

Dear Sir:—

Herewith enclosed please find a statement covering the most important construction work done by me during the period 1900 to 1920, which I trust will give you the record requested of my contracting experience.

Yours very truly,
(Sgd.) H. S. KERBAUGH.

H. S. KERBAUGH. September 20, 1920.

Record of the Most Important Construction Work done by H. S. KERBAUGH,

Contractor, from 1900 to 1920.

BALTIMORE AND OHIO R. R. COMPANY

SAND PATCH TUNNEL, for two tracks, through the Allegheny Mountains about 4500 feet long. Contract time, 17 months.

MAGNOLIA CUT-OFF IMPROVEMENT, for two tracks, including three tunnels and several million yards of very heavy rock work. Contract time, 15 months.

CURTIS BAY IMPROVEMENT, BALTIMORE, MD.: GRAVITY YARD, reinforced concrete pier including the piles and hydraulic dredge work, the material dredged being used for the gravity yard—about 500,000 cubic yards, which were pumped about 3500 feet and lifted about 36 feet. Contract time, about one year.

UNITED STATES GOVERNMENT.

BUFFALO, N.Y.—A very large amount of hydraulic and dipper dredge work, mostly in rock, covering a period of five years' work.

WAR WORK: Aeroplane spruce contract in extreme northwest corner of State of Washington on Pacific Coast. Fifty miles of very heavy main line construction work with two tunnels, completed ready for trains, and 125 miles of heavy branch line railroads, completed ready for track; lumber saw mill at Port Angeles electrically equipped with latest and most modern machinery, having the largest capacity of any mill on the Coast and requiring approximately 300,000 cubic yards of dredging for the preparation of mill site. Expenditure for the above work, about $12,000,000. Time, 4½ months. The contract provided for a total expenditure of about $50,000,000 in 18 months, six months of which were for the above preparatory work, which was estimated at $15,000,000, and the aeroplane spruce product which was to have been delivered in the following twelve months was estimated at $35,000,000. The preparatory work programme was officially considered as being about six weeks ahead of schedule.

THE CITY OF NEW YORK—CATSKILL AQUEDUCT.

KENSICO DAM at Valhalla, N.Y. Officially stated to be the largest of masonry dams. Approximately 1,000,000 cubic yards of heavy cyclopean masonry, backed with large concrete blocks and faced with very heavy granite masonry. Contract time, 10 years. Completed in five years.

A part of the **AQUEDUCT** work for carrying water from the Catskill Mountains to and through the City of New York, about 18 feet in diameter.

These two contracts involved approximately $13,000,000.

STATE OF NEW YORK.

HIGHWAY WORK—300 miles of improved Telford and Macadam highways; constructed during two seasons.

ERIE BARGE CANAL—contracts, including terminals for same, covering a period of five years' work.

CITY OF HARRISBURG.

BRIDGE—Stone arch highway bridge across the Susquehanna River at Harrisburg, about 3,000 feet long.

GRAND TRUNK PACIFIC RY. CO.

RAILROAD—General heavy railroad work for change of line, etc.

PITTSBURG AND LAKE ERIE R. R. CO.

RAILROAD—General heavy railroad work for new line, near Pittsburg, Penn.

PHILA. AND READING RAILWAY COMPANY.

RAILROAD--General heavy railroad work for New York cut-off line.

PENNSYLVANIA RAILROAD CO.

Between New York, Washington, D.C., and Columbus,O.

BRIDGES—Two stone arch bridges over the Susquehanna River, one for two tracks and one for four tracks.

LOW GRADE FREIGHT LINE—for two tracks, along the Susquehanna River, south of Harrisburg, which involved the moving of about eight million cubic yards of rock, the building of the necessary bridges, the tracklaying, etc. Length, ten miles. Contract time, 15 months.

ENOLA GRAVITY AND CLASSIFICATION YARD—double tracking Northern Central Railway for forty miles; building new double track railroad for twelve miles. Work involved the moving of about 7,000,000 cubic yards of rock and 3,000,000 cubic yards of hard-pan; 300 miles of track and the ballasting of same, and the necessary masonry structures. Contract time, fourteen months.

BRILLIANT BRANCH—cut-off line at Pittsburg, for four tracks, which involved the moving of several million yards of rock excavation and the placing of about 200,000 cubic yards of masonry, covering a period of two years' work.

TRACK ELEVATION in and around Pittsburg and Allegheny. Principally heavy masonry work, track work and excavation for fills. Covering a period of about four years' work.

A very large GRAVITY AND CLASSIFICATION YARD south of Altoona, Penn., involving the moving of several million yards of excavation and the building of the necessary masonry structures; also track-laying, ballasting of tracks, etc.

FOUR TRACK ELEVATION through New Brunswick, N.J., including the building of stone arch bridge over the Raritan River and Canal; the building of stone arch masonry structures through New Brunswick, the required filling, track-laying, etc., covering a period of two years' work.

New two track FREIGHT LINE, including classification yards, track-laying, bridges, etc. (about twenty miles in length), between Gallitzin Tunnel, Summit and Holidaysburg, Penn Contract time, one year.

ORGANIZATION AND EQUIPMENT.

Pre-War Work—Largest Single Year—Total force employed on two 10-hour shifts, about 12,000 men.

Plant in operation, 68 steam shovels, with the necessary complement of locomotives, cars, track, derricks, pumps, compressor plants, etc. Cost $3,500,000.

Excavation moved, principally rock, 13,000,000 cubic yards.

Masonry placed, about 450,000 cubic yards.

Track laid and ballasted, about 500 miles.

POLICY OF THE CONTRACTOR.

All work taken was done with his own forces.

Owned and operated his own stone quarries; his own ballast quarries; his own commissaries, and for contracts "A" and "B" manufactured his own dynamite on the site of the work.

Owned and operated his own machine shops (with large storage yard capable of storing his entire equipment if necessary, supply-house, etc.) located at Altoona, Penn., on the main line of the Pennsylvania Railroad, where all equipment was repaired and rebuilt and where all his dump cars were built. This shop was in addition to a repair shop installed on each large piece of work. The equipment and supplies required for a new piece of work were shipped out from the Altoona shops.

Francis Lee Stuart.
Consulting Engineer.
50 East 42nd Street.

Memorandum From Record of Francis Lee Stuart.

Mr. Stuart was born at Camden, S.C., December 3rd, 1866. Graduating from Emerson Institute of Washington, D.C., he gained his first engineering experience in 1884, as rodman on the Baltimore & Ohio R.R. Co. After several years on the Baltimore & Ohio R.R., and on railroads and coal mines in Alabama, he was appointed assistant engineer on the Nicaragua Canal Commission. As district engineer he had charge of a large part of the surveys made in Nicaragua for a canal, including a hydrographic survey of Lake Nicaragua. On his return to the United States he made the estimates of the several proposed canal variants.

Resigning from the Canal Commission in 1899, he again accepted a position on the Baltimore & Ohio R.R., and as engineer of surveys made the studies for grade line reduction over the system.

In 1905 Mr. Stuart was appointed Chief Engineer of the Erie Railroad Co., then contemplating a general scheme for reduction of grades and terminal arrangements. Entering on these studies Mr. Stuart was engaged for five years in an extensive programme of survey and construction work for the Erie System, building some of the heaviest construction work that had been attempted in the Eastern part of the United States, including a scheme of bringing all the branch lines of the Erie into the Jersey City Terminal through a series of four track tunnels and open cuts, with an arrangement of flying junctions which precluded the necessity of trains crossing the tracks of opposing traffic at grade.

In 1910 Mr. Stuart was appointed Chief Engineer of the Baltimore & Ohio Railroad Co., and until 1915 had charge of the general grade reduction work and other improvements, which covered a large construction programme. Included in this expansion work was the construction of a coaling pier at Baltimore following a new scheme originated by himself, under which record rates for coaling vessels have been obtained. Mr. Stuart resigned from the Baltimore & Ohio Railroad Co. in 1915, to open an office as Consulting Engineer on various projects.

Upon our entrance into the War, Mr. Stuart was called to Washington, and as Chairman of the Terminal Port Facilities Committee of the Council of National Defense and of the War Industries Board, outlined a method for handling military supplies, by the War Department and recommended the location and programme installed at the Atlantic Ports, for the Army Bases, which were constructed. He was also a member of the Storage Committee, of the War Industries Board, and of the Depot Board of the War Department.

When the Government took over the Railroads of the United States he was selected Chairman of the Budget Committee and as such passed on all the plans and improvements of the Railroads east of Chicago and north of Norfolk, and made recommendation to the United States Railroad Administration as to whether or not the Government should permit and finance the improvements. Of the $851,000,000.00 authorized for Railroad improvements by the United States Railroad Administration Mr. Stuart passed on some $575,000,000.00 of works, etc.

He has a varied consulting practice in Port and Terminal work and in the Railroad and Industrial fields, and has invented and patented numerous machines and methods for handling materials, and is the originator and owner of the Stuart Systems of handling materials such as coals, ores, etc. The Baltimore and Ohio Railroad Pier at Curtis Bay, with a capacity for loading coal into vessels at the rate of four to six thousand tons per hour, was built from his designs and patents.

Mr. Stuart is Vice-President of the American Society of Civil Engineers, and Past President of the Society of Terminal Engineers.

REPORT of R. S. LEA, Consulting Engineer, on POWER CANAL OF QUEENSTON-CHIPPAWA POWER DEVELOPMENT, Oct. 26th, A. D. 1920.

R. S. & W. S. LEA
Consulting Engineers

New Birks Bldg.,
Phillips Square,
Montreal, Dec. 7th, 1920.

Sir Adam Beck, Chairman,
Hydro-Electric Power Commission of Ontario,
Toronto, Ontario.

Dear Sir Adam:

I hand you herewith revised copy in triplicate of my Report of Oct. 26th, 1920, on the Queenston-Chippawa power development.

So far as the opinions expressed are concerned, no change of importance has been made. Certain alterations and additions, however, have been made in view of more precise information on certain minor matters and with a view of bringing out a few points with greater prominence.

Yours very truly,

(Sgd.) R. S. Lea.

R. S. & W. S. LEA,
Consulting Engineers.

New Birks Building, Phillips Square,
MONTREAL,
October 26th, 1920.

Sir Adam Beck, Chairman,
Hydro-Electric Power Commission of Ontario, Toronto, Ont.

Sir:

On Sept. 14th last you wrote asking me to prepare a report for the Commission on the Queenston-Chippawa Development scheme, covering the following points:—

(A) A discussion of the water levels previously existing, and now and hereafter capable of being maintained on the Chippawa Grass Island Pool, as a basis for establishing the water carrying capacity of the power canal.

(B) A discussion and report on the design of intake proposed by the engineers of the Commission, having particular reference to the merits, if any, it may have as applied to the special conditions it is designed to meet, and as compared with other types of intake which you might consider are suitable, having due regard to efficiency and capital cost.

(C) An opinion based on your conclusions in regard to the above as to the water carrying capacity of the power canal as now designed.

I accordingly submit the following:—

(A) RIVER LEVEL AT CHIPPAWA GRASS ISLAND POOL.

The water levels previously existing at the Chippawa Grass Island Pool have been recorded semi-daily since 1902. The essential facts thereby established are that for the period covered by the records,

The mean level of the Pool was El. 560.5
The max. " " " " " " 563.0
The min. " " " " " " 558.5

The Standard Low Water Level for the Chippawa Grass Island Pool, adopted by the U.S. Lake Survey is El. 559.5. It is true that the Pool has temporarily dropped below this level, but such a contingency is somewhat rare, having occurred only thirty-one times during the past eighteen years; and on only eight of these occasions has it fallen below El. 559.0. In advance of Section (C) it may be here stated that the discharging capacities corresponding to these elevations are 15,500 and 15,100 second feet respectively. Moreover, Pool levels below 559.5 are always the result of an unusual combination of natural causes. They are therefore not only of rare occurrence but are necessarily of short duration, having never lasted longer than twenty-four hours at any one time, and have probably not averaged much over six or eight hours. In other words a Pool level of 559.5 or higher can be depended upon for all but about one-tenth of one per cent. of the time.

So far as the regular output of the Power plant is concerned, the result is still more favourable, for the reason that of the total number of times that there is any deficiency in level, only about one-third occur in December and January, when the load is greatest; and even in these months account should be taken of the fact that they may happen during off-peak hours, or on Sundays or other days of light load.

In view of the considerations just referred to, it is my opinion that the dependable capacity of the Power Canal and the Chippawa-Queenston Hydro-Electric Power Development, in so far as they depend upon the Niagara River levels, can be very conservatively based on that stage of the river which under present conditions corresponds to El. 559.5 in the Chippawa Grass Island Pool.

The diversion of part of the flow of the Niagara River into the Chippawa-Queenston Canal would however tend to lower the water level in the Pool, unless compensated for in the river at or below the entrance to the canal. As will presently be referred to under Section (C), the quantity of water it is proposed to divert will be between 15,000 and 16,000 sec. feet, and even if no special nor incidental compensating works were provided at all, the diversion of this quantity of water would not lower the Pool, at the most, by more than five inches. As a matter of fact, however, the compensating effect of the Canal Intake structures as proposed, and of the adjacent and incidental work connected therewith, will be sufficient to offset any effect the proposed diversion tends to have in the way of lowering the level of the Grass Island Pool.

It should further be observed with regard to the permanence of the level of the Pool and the possibility of maintaining it, that if further diversions are permitted in the future, the natural conditions in the bed of the river below the Canal entrance lend themselves very favorably to the convenient and economical construction of whatever remedial works may be found necessary to maintain the present levels or to raise them to some extent if it should prove desirable to do so.

When, therefore, the dependable capacity of the Power Canal is dealt with under Section (C), it will be based on a river elevation of 559.5 at the Chippawa Grass Island Pool.

(B) INTAKE.

The design and construction of the necessary works at the entrance to the Power Canal presents no difficulties so far as summer conditions are concerned. In the winter season, however, the Niagara River at times carries considerable drift ice and frazil, against which all power plants in northern climates require protection.

In the Chippawa-Queenston scheme this feature is of more than ordinary importance on account of the great length of the power canal, approximating twelve miles, and the magnitude of the development. The extent to which the ice can be eliminated from the water diverted into the canal will be the measure of the success of the design and construction of the Intake Works. The problem is not an easy one, and it has never been completely solved under similar conditions in connection with works of the extent proposed in this development. In the absence of successful precedents, exhaustive tests have therefore been carried out over a period of two years by Prof. Angus of Toronto University under the direction of the Commission's engineers, all of whom have had many years' experience in connection with the construction and operation of hydro-electric developments at Niagara Falls.

These experiments were conducted on a larger scale than any previously attempted in connection with hydraulic work of this kind. A section of the Niagara River channel embracing the entrance to the Welland River, and extending for a long distance up and down stream, was constructed on a scale of 1 to 20. Experiments were made with different kinds of intakes, as a result of which a certain type was evolved which indicated marked superiority over the others as a means of preventing ice from being carried into the canal. A special series of tests of this type were carried out under the general direction of Mr. R. D. Johnson, Consulting Engineer, of New York, who subsequently worked out the design which has finally been adopted.

Without referring to details with which you are familiar, the canal entrance works as designed may be described as forming two intakes which are quite separate in their action and which may be operated either independently or in combination. One of these is a surface intake of the so-called fixed or permanent boom type, constructed throughout of concrete and provided with fifteen openings 18′ wide and 28′ deep below the curtain wall, all controlled by gates operated from an upper platform or deck. This structure, including the navigation lock which is incorporated with it, will extend out into the river for a distance of about 700′ in a direction slanting down stream. It represents the simplest and best method for the control and admission of water into the power canal except at such times as the ice conditions are troublesome; and since it is of paramount importance to insure continuity in the operation of such a large plant, the second intake has been specially designed for ice protection.

It is entirely submerged, and consists of six parallel concrete tubes, 100 feet on centres and 600 feet in length, which extend out diagonally into the river, in an upstream direction, from the boom type intake referred to above. These tubes will be built on rock, which occurs here at about 16 feet below the river bottom. They will be set at such a depth that the top of the tubes will be at the same elevation as the original river bed. They are horseshoe-shaped in cross section, with an inside diameter of about 20 feet for the greater part of their length, terminating in a tapering section at the outer end. They enter the canal through the surface intake and between its openings, at which point they are provided with control gates and expanding mouthpieces. For the first hundred feet from the control gate the wall of the tube is continuous, but beyond this and extending to the outer end there is a longitudinal opening or slot of varying width, located a little below the top and provided with guide vanes to properly direct the entering water. A most important and unique feature is that the tubes and inlets are so designed that the inflow of water will take place at a pre-determined rate per foot of length of tube.

In addition to the excavation necessary to set the tubes at the proper elevation, the earth overlying the rock will be removed on the upstream side of each tube. In the case of the tube furthest up this trench will have a width of 100 feet.

The special form of intake just described will have several advantages over any so far devised for excluding ice from the canal. In the first place, on account of its submergence, it is free from one of the principal objections to the boom type of intake, which of necessity forms a surface obstruction against which the floating ice tends to accumulate and be drawn under by the down draft of the inflowing water. In the second place, and for the same reason, the inlets are as far removed as possible from the surface water where most of the ice is carried which is likely to give trouble in connection with the operation of the canal. In the third place, the openings are distributed over such a considerable area of the bottom of the river that the water will enter the tubes with minimum disturbance of the flowing stream. Moreover it is the only intake yet proposed in which the rate of inflow at every point can be effectively and positively controlled.

Usually only the surface intake will be in service and the loss of head at the entrance to the canal will be of little importance. It is estimated, however, that when the gates of this intake are closed, and a draft of 15,000 sec. ft. is drawn entirely through the submerged intake, the loss of head will be somewhat less than six inches. This condition will prevail for only a comparatively small proportion of the total time, but in estimating the dependable carrying capacity of the power canal, the loss at the canal entrance has been based on the assumption that only the second intake is in service.

The cost of the entire structure will be at least twice that of the ordinary fixed boom type of intake of equal stability and with as effective provision for the requirements of navigation. The total estimate as prepared by your engineers is a little less than $3,000,000.00. In the initial installation, however, it is intended to build only part of the submerged intake, terminating the tubes about 100′ from the control gates. This will reduce the estimates for immediate expenditure in connection with the intakes to $2,000,000.00. When the draft of the power canal increases to such an extent as to require it, the second intake will be carried to completion.

Experience on the St. Lawrence and other rivers in Canada has demonstrated that the difficulties of dealing with ice are much greater in the case of a long canal or head race than where the supply is directly to the power house. Hence every care should be taken, as has been done here, to ascertain the form of intake which will provide the best possible protection against the entrance of ice under the conditions which exist in the river in the vicinity of the intake; and, as the canal is the sole channel of supply to the entire power plant, the effectiveness of this protection becomes of still greater importance, and a relatively high first cost is fully warranted. I am therefore of the opinion that the expenditure involved in the construction of the Chippawa intake as proposed, is justifiable on the grounds just mentioned, in view of the additional security which this particular type of intake will afford against serious troubles from ice entering the canal.

(C). CARRYING CAPACITY OF THE POWER CANAL.

After having observed the character of the work of lining the rock section, and having given due consideration to other points which have an important bearing on the matter, I am of the opinion that conservative values have been adopted by your engineers for the hydraulic co-efficients, which are the controlling factors in determining the discharging capacity of the canal. I am therefore in agreement with their estimates in this regard.

The dependable capacity so far as power is concerned, can, as stated previously, be based on a river level at Chippawa of 559.5. With this elevation, and assuming a loss of head in the intake of six inches, the calculated capacity of the canal, as now designed, is about 15,500 second feet. With a river level of 559.0, and a similar intake loss, the capacity would be about 400 second feet less.

In view of what has just been stated, and of the fact that provision is to be made for keeping the canal open in the reaches of low velocity, where an ice cover may tend at times to form, I am of the opinion that the dependable capacity for power purposes may safely be taken at not less than 15,000 cubic feet per second.

Yours very truly,

(Sgd.) R. S. Lea.

SIR ADAM BECK, Chairman.
Hydro-Electric Power Commission,
Toronto, Ontario.

This is in acknowledgment of and in reply to your letter of October 6th making inquiry as to our judgment in respect of the lowering of the water in the the Grass Island-Chippawa Pool by diversions from the Niagara River.

This matter is one that we consider of vital importance, and we are much concerned lest there be a lowering of the water level in this pool.

The Niagara Falls Power Company and its constituent companies have, for over twenty years and at the expense of millions of dollars, based their intake work, waterways and power stations upon the levels for this pool in the natural flow of the river established by the U.S. Lake Survey, which has given elevations as indicated below:

	Lake Erie	Grass Island Guage
1. Mean Water Level	572.58	562.06
2. Standard Low Water	570.0	560.6

It is, therefore, apparent that any diversion that would change these levels must be viewed by us as detrimental to our interests, and it is our judgment that 560.6 (U.S. Lake Survey datum) as measured on the Grass Island guage, is the lowest level of this pool under which we can safely and continuously divert the water allowed by the treaty for power purposes upon the American side above the Falls.

Our engineers also advise that there is a difference of approximately 1.7 feet between the U.S. Lake Survey datum and that used by the Hydro-Electric Power Commission; also that there is now a difference of level in the Grass Island-Chippawa Pool, the Chippawa side being approximately 0.6 feet higher than the Grass Island side. Therefore, correcting for these factors, the elevation of 560.6 (U.S. Lake Survey datum) on this side of the river would correpond to approximately 559.5 at Chippawa (Hydro-Electric Power Commission datum).

We, of course, appreciate that natural conditions, such as wind and ice, will, from time to time, impose a condition of low water upon the Niagara River which will temporarily lower even the standard low water levels above mentioned.

In regard to what recourse or remedy should be applied for the maintenance of the above levels in case of their being lowered by diversion, we believe it should take the form of such remedial works as would meet the approval of the respective governments, and also of the power developing interests which have based their works upon the above established levels. This would be in accord with the procedure previously agreed upon in the matter of disposing of excavated material from our respective intake works in such portion of the Chippawa-Grass Island pool as will most effectively compensate for any lowering of the natural levels.

Yours very truly,
(Sgd.) PAUL A. SCHOELLKOPF.

THIRD ANNUAL REPORT

OF THE

CIVIL SERVICE COMMISSIONER

FOR

ONTARIO

For the Year ending October 31, 1920

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO:
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1921

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TORONTO, April 14th, 1921.

TO HIS HONOUR LIONEL HERBERT CLARKE,

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present to Your Honour the Third Annual Report of the Civil Service Commissioner for Ontario for the fiscal year ending October 31st, 1920.

Respectfully submitted,

E. C. DRURY,

Prime Minister and President of the Council.

TORONTO, March 30, 1921.

TO THE HONOURABLE E. C. DRURY,
Prime Minister of Ontario,
Parliament Buildings.

DEAR SIR, I respectfully submit herewith my Third Annual Report for the fiscal year ending October 31, 1920.

Yours respectfully,

J. M. McCUTCHEON,

Civil Service Commissioner.

Third Annual Report

# of the

Civil Service Commissioner

for Ontario

To the Honourable,
The Prime Minister of Ontario.

Sir, In compliance with Section 11 of The Ontario Public Service Act, 1918, I have the honour to submit my Report for the fiscal year ending October 31, 1920.

The year covered by this Report, notwithstanding the social unrest and the unsettled industrial and economic conditions prevailing throughout the world during the acute period of readjustment consequent upon the war, has been marked by substantial progress in the attainment of better conditions in the Ontario Public Service. I concluded my Annual Report of a year ago with these words, "The outstanding needs of the Ontario Public Service to-day are, I feel, the classification of the positions therein, the standardization of salaries, the adoption of a retirement system, and the application of the merit system to employment problems." During the past fiscal year three of these objectives have been attained and considerable progress made toward the attainment of the fourth.

The Classification of the Service.

The Report on the Classification of the Public Service was submitted to the Government in February and later tabled in the Legislature. This Report emphasized the urgent need of the classification of the various positions in the Public Service as a basis for better organization and for improved methods of dealing with employment problems and as an effective aid in the selection and the maintenance of an efficient personnel. Inasmuch as the public business is the most important business of a nation and as the quality of the service rendered by a government is determined in the last analysis by the character of its personnel, it is of first importance to the State that it should secure as its employees highly competent and capable men and women, otherwise the government is handicapped in the effective discharge of its functions. Lack of efficiency in the work of a government means waste of money to the public, loss of character to the employee, and deterioration of the service generally. Classification is an essential preliminary step to efficient organization. It supplies a sound basis not only for the systematic and coherent organization of the service but also for employment control. It confers definite benefits upon the employee by materially improving service conditions and by giving him greater opportunity to work out a career on the basis of individual merit. It is a means to an end, supplying the foundation upon which the whole superstructure of governmental administration can be best built. If properly administered, it should contribute substantially to efficiency and economy in public business and prove of permanent value to the Province.

In applying the Classification to the personnel of the Service, due regard was given to the principle of merit and to the qualifications of employees, the rights of each individual receiving careful consideration. The co-operation of the various departments greatly facilitated this work which was practically completed early in October.

The Standardization of Salaries.

The application of the schedules of compensation under the Classification has resulted in the standardization of salaries in the Public Service, which was very badly needed. Inequalities and unjustifiable differences in salaries invariably arise in any service administered without due regard for sound employment principles, and the solution of the whole problem lies in the standardization of salaries on a proper basis and the consistent application of the merit system. Where the salaries in a service are not standardized there is no equitable system on which to base promotions and transfers. There is also lack of incentive to employees.

The standardization of salaries should result in a very substantial improvement in the administration of the Public Service. The schedules of compensation, properly applied, eliminate inconsistencies in the pay-roll and prevent increases beyond the range provided without change in duties and responsibilities. They equalize the remuneration for positions with similar duties and like responsibilities and tend to define the lines of promotion. They substitute system for chaos and aid materially in preserving the integrity of the merit system as applied to employment problems.

In working out the schedules of compensation, it has been kept in mind that the minimum remuneration for any position should be a living wage. The salary should at least be sufficient to enable the employee to maintain a proper standard of living. A worker who receives less than a living wage is either being partially supported by others or is living below the subsistence level. Such a condition is not in the best interests of society. Everyone who does a reasonable day's work to supply an economic demand should receive at least sufficient to live upon. There is nothing ideal about the principle of a minimum wage. It is merely an elementary principle of social justice, the observance of which should be insisted upon by the State.

Salaries should be adequate, fair, and equitable. Adequacy as applied to salaries is difficult to define owing to different standards of living. It implies, however, that the salaries should be sufficient to provide for the reasonable needs of employees in meeting the obligations involved in good citizenship. The compensation of civil servants should be commensurate with the service rendered and more comparable with the financial rewards for service in the business world. The classification provides for this. If the State is to be a model employer in every respect, as it undoubtedly should be, there should be no great discrepancy in salaries as between public and private employment. The public has the same right to be protected against excessive salaries as the employees have to receive adequate salaries. No employee paid out of public funds should receive more, nor less, than the position which he holds is worth. In its capacity as employer, the Government is therefore under obligation to protect both the public and its employees in the matter of salaries.

THE RETIREMENT SYSTEM.

The Ontario Public Service Superannuation Act was passed during the Session and became effective on June 15. The need for this legislation had long been felt in the Public Service, both by Governments and employees, and considerable satisfaction has resulted from the enactment of the Statute. The operation of the Act will undoubtedly have a stabilizing effect upon the Service, the economic value of which it would be difficult to determine. It is well known, however, that the labour turnover in the Public Service has in recent years been a very costly item. Improvement in this respect is already in evidence. It is now generally conceded that the payment of wages does not discharge an employer's full responsibility toward his workmen. In addition, he must provide suitable working conditions, safeguard their lives and health, and generally interest himself in their welfare. Nor can he fulfil his obligations by looking after their immediate needs and interests alone; their future has a claim upon him as well. By passing The Ontario Public Service Superannuation Act, the Legislature has supplied the necessary machinery to enable the employees of the Government to provide in a systematic way for their old age, to promote a general sense of security and contentment, and to protect the Public Service against old age inefficiency.

Those who have had experience in governmental administration know that, owing to the very nature of government service, the tendency in the absence of a retirement system, is to keep an employee on the pay-roll as long as he is able to go to his office and sometimes even longer. This practice results in immeasurable loss to a government. It chokes the avenues of promotion, usually continues the use of obsolete and costly methods, hampers departmental work, and adds considerably to the cost of administration. The evil consequences of retaining a single civil servant in an important position after he has become incompetent cannot be readily estimated in money, but is likely to be several times the cost of his superannuation. It is very difficult to gauge with precision the effect on the morale of a staff of retaining in the Service those who have reached the superannuation age, but it is well known that the retention of such employees usually causes stagnation and operates against effective service. To secure and retain competent men and women, a government must offer inducements similar to those held out by leading business firms and by financial and industrial institutions, and among the chief of such inducements is the opportunity for promotion. Owing largely to the lack of such opportunity, it has become increasingly difficult for governments to retain in their administrative services men of initiative and force. Only by superannuating or retiring the inefficient can the avenues of promotion be kept open and the services of competent employees be retained. The general effect of an adequate retirement system is to promote the efficient and economical working of the Public Service, and in so far as a government consults the public interest, it establishes a retirement system mainly as a business proposition to secure better service. Properly administered, The Ontario Public Service Superannuation Act should prove to be an economic measure of first importance.

INCREASES IN SALARIES.

General increases in salaries on the basis of the schedules of compensation under the Classification were given during the year. In many classes of positions the increases awarded were very substantial owing to the fact that they were underpaid for years. For example, the Engineering Service as a whole was very much underpaid. The first application of the schedules of compensation involved the elimination of inequalities and anomalies in salaries, which accounts for many of the larger increases. Each individual case received careful study before the compensation was adjusted, due regard being given to all the factors bearing on the matter.

BONUS TO EMPLOYEES.

The cost-of-living curve which commenced to rise in 1915 continued its upward course until July, 1920, when it reached the peak and entered on its downward course, the decline so far being very slight. The persistent rise in the curve until nearly two years had elapsed after the close of the war ran counter to the theory of many economists but probably reflected actual conditions in the economic world. The cost of living in Ontario was higher in October, 1920, than in October, 1919.

To assist employees to meet this temporary inflation in prices the Government passed an Order-in-Council on December 24, 1919, approving Regulations respecting a cost of living bonus to be applicable for the fiscal year commencing November 1, 1919. The bonuses were graded according to the salaries on the principle that the largest bonus should be paid employees with the lowest salaries. The bonus payable to heads of households ranged from $360 on salaries under $1,200 per annum to $120 on salaries over $2,500 but less than $3,000. No bonus was payable to employees receiving a salary of $3,000 or over. The bonus payable to employees under eighteen years of age was $75. Employees over eighteen years of age, not the heads of households, were eligible for a bonus ranging from $180 on salaries less than $900 per annum to $90 on salaries over $1,500 but less than $1,800. No bonus was payable to employees in this group receiving a salary of $1,800 or over. In the case of employees receiving perquisites, such as living quarters, fuel, or food, a moderate valuation was placed thereon which was considered as constituting part of the total remuneration received by the employee. Inasmuch as current values were not placed upon perquisites, such being deemed inadvisable owing to the belief that the present inflation in prices is purely temporary, the bonus payable to those receiving perquisites was computed in accordance with the following provision: Where the value of the perquisite or perquisites received by an employee does not exceed $100, he shall be entitled to four-fifths of the bonus; where the value does not exceed $200, three-fifths of the bonus; where the value exceeds $200, two-fifths of the bonus. The bonus was payable quarterly by separate cheque designated "Cost of Living Bonus."

APPOINTMENTS.

As indicated in the tables in the Appendix of this Report, the appointments to the Public Service, made under Certificate required by The Ontario Public Service Act, 1918, during the fiscal year ending October 31, 1920, were as follows: Permanent, 539; Temporary (new), 452; Temporary (renewals), 509; total, 1,500. There were 720 new appointments made to the Service. Of these, 268 were appointed to the permanent staff. Two hundred and forty-nine employees who had previously been on the temporary staff, although actually in permanent positions, were transferred to the permanent staff, and 22 employees were transferred from one permanent position to another. The increase in appointments is due mainly to the considerable expansion of governmental activities in the various departments. During the year there were 56 resignations from the permanent staff, Inside Service, and 216 temporary employees discontinued their duties.

The numerous promotions made during the year have been productive of excellent results and have had a stimulating effect upon the Service generally. The recognition of the principle of promotion has put heart into the Service. Employees now feel that they have something to work for and realize as never before that merit is the key that unlocks the doors to higher positions.

Another interesting feature in connection with appointments made during the year is to be found in the fact that a number of vacant positions were advertised in the public press. This departure from former methods has resulted in distinct benefit to the Service. I strongly recommend its continuance and more general use.

PREFERENCE TO WAR VETERANS.

Throughout the year, preference has been given to war veterans in the appointments made to the staffs of the various departments in the Public Service, the Government taking the view that the war services and sacrifices, both of men and women, deserve State recognition. In this preference, the physically handicapped veteran has been given first consideration. In making these appointments, careful study is given each individual case, every effort being made to assign the veteran to duties for which he has special fitness or aptitude or to which he can readily adapt himself. In giving this preference to war veterans, the needs and requirements of the Service have been kept constantly in first place, those receiving appointments being properly qualified for their duties. The results of this preference, as expressed in the quality of the service rendered, have been very satisfactory, and the preference has not impaired the integrity of the merit system which rests upon the fundamental principle, that public office is a public trust and should be awarded only according to proved capacity.

ORGANIZATION.

During the period covered by this Report, considerable study and attention were given to matters relating to the organization of the Service, recommendations for improvement therein being made to the Ministers of the various Departments. Considerable reorganization was found to be necessary in the interest of economy and efficiency. The whole trend in organization, based upon actual needs is away from the multiplication of office units and toward consolidation. Consolidation tends to eliminate waste and overlapping and to facilitate the transaction of public business.

Every office of the Government should be so organized that all its activities will function smoothly and effectively—with speed, accuracy, and dependableness. An efficient office controls and co-ordinates its activities and conserves time and energy. The duties of its various officials and employees, their inter-relations and the lines of authority are clearly defined and right attitudes toward others and the work are maintained. In any well organized department a spirit of sympathy and fair dealing should characterize the relations between employees, for the most efficient and satisfactory results are contingent upon mutual confidence and respect.

The responsibility for the maintenance of a proper organization in any department depends in the last analysis upon the attitude and constant alertness of the deputy head and the co-operative relations which he has been able to establish in his department.

Frequent survey of the duties of employees in each branch of every department should be made, and consolidation effected wherever possible in the best interests of the department. It is of special importance that a careful survey should be made when resignations take place. If this plan were adopted, the overmanning of any staff could be prevented. To secure the greatest economy and efficiency in the Public Service, constant attention must be given in every department to problems arising in connection with organization.

THE APPLICATION OF THE MERIT SYSTEM.

The consistent and resolute application of the merit principle in making appointments to the Service, in determining promotions, transfers, and salary increases, and in all other employment problems will ensure efficiency and economy in the Public Service, eliminate patronage of all kinds, and supply a sound basis for the proper administration of public affairs. It will tend to keep the cost of personal service in our Province within reasonable bounds for the future and will have a beneficial influence upon the character and the capacity of employees. Every departure from the principle of merit in dealing with matters relating to employment lessens the value of our governmental machinery and tends to make more difficult the personal service problems of the future. Work of the highest quality will be obtained when merit is consistently made the basis of entry into the Public Service and of continuance and promotion therein.

Respectfully submitted,

J. M. McCUTCHEON,

Civil Service Commissioner.

APPENDIX

SUMMARY OF CERTIFICATES ISSUED.
PERMANENT APPOINTMENTS.
TEMPORARY APPOINTMENTS (Renewals).
TEMPORARY APPOINTMENTS (New).

SUMMARY OF CERTIFICATES

Issued During the Fiscal Year Ending October 31, 1920

	Permanent	New Temporary	Temporary Renewals
Office of the Lieutenant-Governor	2		
Department of The Prime Minister and President of the Council	2	4	9
Department of Agriculture	46	49	13
Department of The Attorney General	63	40	28
Department of Education	95	93	56
Department of Game and Fisheries	50	3	11
Department of Labour	84	94	116
Department of Lands and Forests	17	9	19
Department of Mines	10	17	14
Department of the Provincial Secretary	86	58	92
Department of Public Works	15	3	16
Department of Public Highways	33	55	75
Department of The Treasurer	25	26	51
Audit Office	11	1	9
Totals	539	452	509
Grand Total 1,500			

CERTIFICATES ISSUED FOR

DURING THE FISCAL YEAR

OFFICE OF THE

Name.	Position.
Sime, A. Watson	First Assistant Secretary
Stott, Barbara J.	Second Assistant Secretary

DEPARTMENT OF THE PRIME MINISTER

Name.	Position.
Grant, George	Assistant Secretary
Wiley, Beulah	Clerk Stenographer

DEPARTMENT OF

Name.	Position.
LaRose, J. A. Ferdinand	Agricultural Representative
Bryden, R. J.	Agricultural Representative
Francis, J. F.	Chief of Poultry Extension Work
Fleming, R. R.	Agricultural Representative
Cook, Milford F.	Drainage Surveyor
Watson, K. B.	Clerk
Rettie, J. E.	Assistant Director
Tutt, Harry	Clerk
Stuart, Thos. H.	Bursar's Clerk
Evans, W. G.	Demonstrator in Biology
Cabledu, C. Victor	Clerk and Postmaster
Creelman, Dr. G. C.	Agent General for Ontario in the British Isles
Cooper, Thomas	Agricultural Representative
Caldwell, W. C.	Agricultural Representative
Clark, Andrew P.	Butter Grader and Dairy Instructor
Reynolds, J. B.	President
Reilley, E. E.	Demonstrator in Farm Economics
Leitch, A.	Professor of Farm Economics
Coke, J.	Lecturer in Farm Economics
Spencer, G. J.	Lecturer in Entomology
Fulmer, H. L.	Associate Professor of Chemistry
Sproule, William H.	Demonstrator in Dairying
Shorey, W. Percy	Drainage Surveyor
Fairweather, W. J.	Enumerator
Percival, Samuel E.	Assistant to the Agent General for Ontario in the British Isles
Neilson, J. A.	Lecturer in Horticulture
Shepherd, A. L.	Clerk
Heimpel, L. G.	Instructor in Farm Engineering and Drainage
Hampson, E. K.	Instructor in Field Husbandry, Soil Physics, Agricultural Chemistry and Bacteriology
Cook, M. F.	Agricultural Representative
Jackson, W. D.	Assistant Director of Agricultural Representatives
Laidlaw, C. M.	Superintendent
Porter, A. McM.	President's Secretary and Registrar
Matheson, D. J.	Agricultural Representative
Knox, R. G.	Lecturer in Animal Husbandry
Griffiths, E.	Junior Clerk Stenographer
Proctor, J.	Junior Clerk Stenographer
Lowe, A. W.	Junior Clerk
Cruickshank, Olive R.	Director of Macdonald Institute
Wheatley, A. C.	Lecturer in Geology and Soils
McGillivray, A. D.	Clerk
Collet, H. B.	Assistant Instructor and Demonstrator
McIntosh, R. A.	Instructor in Diseases of Cattle, Sheep, Swine and Obstetrics
Nelson, H. D.	Instructor in Anatomy
Fowler, Dr. W. J. R.	Instructor in Surgery
Pringle, J. N.	Instructor in Sporadic Diseases

PERMANENT APPOINTMENTS

ENDING OCTOBER 31, 1920

LIEUTENANT-GOVERNOR.

Branch or Office.	Salary.		Date of Certificate
	$ 600 00	per annum	Dec. 4
	600 00	"	Sept. 3
AND PRESIDENT OF THE COUNCIL.			
Prime Minister	$1,800 00	"	Dec. 13
Executive Council	975 00	"	Sept. 3
AGRICULTURE.			
Prescott and Russell	$1,500 00	"	Dec. 1
Welland	1,400 00	"	Dec. 16
Ontario Agricultural College	2,000 00	"	Jan. 24
Halton	1,500 00	"	Jan. 26
	1,200 00	"	Jan. 26
Statistics and Publications	1,100 00	"	Jan. 27
Live Stock	1,500 00	"	Feb. 25
Colonization and Immigration	1,500 00	"	Mar. 25
Ontario Agricultural College	1,300 00	"	Mar. 31
Ontario Agricultural College	1,200 00	"	Apr. 7
Ontario Agricultural College	1,100 00	"	Apr. 8
	6,500 00	"	Apr. 8
Grey	1,500 00	"	Apr. 15
Dundas	1,500 00	"	Apr. 29
Dairy	125 00	per month	May 25
Ontario Agricultural College	6,600 00	per annum	May 31
Ontario Agricultural College	1,600 00	"	June 25
Ontario Agricultural College	3,000 00	"	June 25
Ontario Agricultural College	2,000 00	"	June 25
Ontario Agricultural College	1,200 00	"	June 25
Ontario Agricultural College	2,000 00	"	June 25
Ontario Agricultural College	1,800 00	"	June 30
Ontario Agricultural College	1,500 00	"	July 6
Ontario Agricultural College	1,500 00	"	July 13
	3,000 00	"	July 21
Ontario Agricultural College	2,000 00	"	July 24
Ontario Veterinary College	1,400 00	"	Aug. 9
Kemptville Agricultural School	2,200 00	"	Aug. 12
Kemptville Agricultural School	2,425 00	"	Aug. 13
District of Kenora	1,800 00	"	Aug. 19
Agricultural Representatives' Branch	2,700 00	"	Aug. 21
Demonstration Farm, Monteith	1,150 00	"	Aug. 21
Ontario Agricultural College	1,600 00	"	Aug. 23
Carleton County	1,800 00	"	Aug. 23
Ontario Agricultural College	2,000 00	"	Sept. 1
Institutes and Dairy	850 00	"	Sept. 3
Co-Operation and Markets	850 00	"	Sept. 3
Live Stock	850 00	"	Sept. 3
Ontario Agricultural College	2,800 00	"	Sept. 13
Ontario Agricultural College	2,000 00	"	Sept. 18
Colonization and Immigration	1,300 00	"	Sept. 24
Ontario Veterinary College	1,400 00	"	Oct. 1
Ontario Veterinary College	1,800 00	"	Oct. 1
Ontario Veterinary College	1,800 00	"	Oct. 1
Ontario Veterinary College	1,200 00	"	Oct. 1
Ontario Veterinary College	1,800 00	"	Oct. 1

DEPARTMENT OF THE

Name.	Position.
Boyd, Edward Wilson	Assistant Master-in-Ordinary
Edmunds, Beryl W.	Stenographer
Walker, Minnie V.	Registrar of Deeds
Reid, Major E. O.	Chief Accountant
Baker, A. E.	Clerk to the Law Clerk
Burritt, D. H.	Account Clerk
Wixon, Hazel	Stenographer
Duncan, Miss F. M.	Stenographer
Hedley, Miss M.	Filing Clerk
Mundy, Miss E.	Stenographer
Nicol, Arthur W.	Office Boy
McLean, Judge E. H.	Local Master
Gray, Victor Evan	Superintendent of Insurance and Registrar of Loan Corporations
Sanderson, Frank	Consulting Actuary
Meek, Arthur A.	Constable
Finlayson, Duncan	Constable
Cooke, Henry Porter	Crown Attorney and Clerk of the Peace, District of Kenora
Stringer, William H.	Inspector
Gray, Victor Evan	Registrar of Friendly Societies
Watters, Charles Edward	Constable
Holmes, George W.	Assistant Master of Titles
Bullen, George	Constable
McCaul, W. J.	Clerk
Campbell, Della M.	Stenographer
Macreath, C. M.	Sheriff for the District of Algoma
Airey, C. F.	Constable
Beatty, John McL.	Local Registrar of the Supreme Court of Ontario, County Court Clerk and Surrogate Registrar in and for the County of Renfrew
Davies, W. J.	Chief Secretary of the Judges' Secretarial Staff
Armour, Eric N.	Crown Attorney for the County of York
Porter, Albert T.	Local Registrar, S.C.O., County Court Clerk, and Surrogate Registrar in and for the County of Victoria
Hughes, Frederick	Constable
Urquhart, John	Constable
Constable, T. H.	Constable
Paxton, Arthur T.	Constable
Puley, Percy M.	Account Clerk
Smelt, William John	Secretary
Kearns, John McK.	Crown Attorney and Clerk of the Peace for County of Wellington
Jones, H. S.	Senior Clerk
Thurgarland, Miss M. E.	Clerk Stenographer
Maginnis, P.	Junior Clerk
Cameron, John	Office Boy
Charlton, W. M.	Crown Attorney and Clerk of the Peace, County of Brant
Parkhill, Madge	Junior Clerk Stenographer
Myers, Richard	Clerk
Paxton, Arthur T.	Constable
Howie, James R.	Constable
Palmer, Arthur H.	Constable
Cox, Richard	Constable
Stratton, Thomas Y.	Constable
Ward, Albert H.	Constable
Bailey, William F.	Constable
Brady, James	Constable
Gardner, Hamor	Constable
Taylor, John	Constable
Low, Findlay	Constable
Elliott, Robert J.	Constable
Wilson, Harold R.	Constable
Rae, Everett A.	Constable
Young, Sydney B.	Constable

ATTORNEY GENERAL.

Branch or Office.	Salary.	Date of Certificate.
Osgoode Hall	$3,000 00 per annum	Nov. 27
Minister's Office	1,000 00 "	Dec. 17
East and North Ridings of the County of Middlesex		Dec. 18
The Public Trustee	2,500 00 per annum	Dec. 18
	1,400 00 "	Dec. 22
The Public Trustee	1,500 00 "	Dec. 22
The Public Trustee	900 00 "	Dec. 23
The Public Trustee	1,000 00 "	Dec. 23
The Public Trustee	1,050 00 "	Dec. 23
The Public Trustee	1,050 00 "	Dec. 23
	550 00 "	Dec. 31
County Prince Edward		Jan. 16
Insurance	4,500 00 "	Jan. 28
Insurance	3,600 00 "	Jan. 28
Ontario Provincial Police Force	1,250 00 "	Jan. 31
Ontario Provincial Police Force	1,250 00 "	Feb. 9
		Feb. 17
Ontario Provincial Police Force	1,900 00 per annum	Mar. 8
Insurance		Mar. 12
Ontario Provincial Police Force	1,250 00 per annum	Mar. 22
Land Titles	2,800 00 "	Apr. 1
Ontario Provincial Police Force	1,250 00 "	May 17
Audit of Justice Accounts	1,300 00 "	May 18
The Public Trustee	1,000 00 "	May 19
		May 21
Ontario Provincial Police Force	1,250 00 per annum	May 28
		June 12
Osgoode Hall	2,000 00 "	June 14
		June 23
		July 23
Ontario Provincial Police Force	1,350 00 per annum	Aug. 3
Ontario Provincial Police Force	1,350 00 "	Aug. 3
Ontario Provincial Police Force	1,250 00 "	Aug. 3
Ontario Provincial Police Force	1,250 00 "	Aug. 3
The Public Trustee	1,600 00 "	Aug. 16
Insurance	1,600 00 "	Sept. 7
		Sept. 11
The Public Trustee	1,800 00 per annum	Sept. 15
The Public Trustee	975 00 "	Sept. 15
The Public Trustee	775 00 "	Sept. 15
Osgoode Hall	625 00 "	Sept. 17
		Sept. 21
Audit of Justice Accounts	850 00 per annum	Sept. 27
Land Titles	1,200 00 "	Sept. 29
Ontario Provincial Police Force	1,700 00 "	Oct. 11
Ontario Provincial Police Force	1,400 00 "	Oct. 12
Ontario Provincial Police Force	1,400 00 "	Oct. 12
Ontario Provincial Police Force	1,400 00 "	Oct. 12
Ontario Provincial Police Force	1,400 00 "	Oct. 12
Ontario Provincial Police Force	1,400 00 "	Oct. 12
Ontario Provincial Police Force	1,400 00 "	Oct. 12
Ontario Provincial Police Force	1,400 00 "	Oct. 12
Ontario Provincial Police Force	1,400 00 "	Oct. 14
Ontario Provincial Police Force	1,400 00 "	Oct. 14
Ontario Provincial Police Force	1,400 00 "	Oct. 14
Ontario Provincial Police Force	1,400 00 "	Oct. 14
Ontario Provincial Police Force	1,400 00 "	Oct. 14
Ontario Provincial Police Force	1,400 00 "	Oct. 14
Ontario Provincial Police Force	1,400 00 "	Oct. 14

DEPARTMENT OF THE

Name.	Position.
Ataman, John	Constable
Wetherall, Frank	Constable
Glasby, Arthur R.	Constable
Wallis, George E.	Junior Clerk

DEPARTMENT OF

Gillespie, Frederick	Engineer
Thompson, Dorothy A.	Assistant
Jenkins, John Thomas	Engineer
Sebben, Mrs. M.	Secretary
Lowry, Muriel V.	School Nurse
Rutherford, Frank S.	Organizer
Cockburn, Dr. Harriet	Medical Inspection Officer
Dix, Gladys	Secretary and Stenographer
McKimm, Elsie	Organizer
Northgate, Ernest	Engineer
Scanlon, James	Inspector of English-French Schools
Quarry, Vincent C.	Inspector of Separate Schools
Doyle, Daniel J.	Fireman
Whitelaw, George	Special Clerk
Pentland, George E.	District Inspector for Northern Ontario
Wilson, Blanche A.	Teacher
Ward, Susannah E.	Teacher
Bradley, V. Gladys	Teacher
Lunn, Helena	School Nurse
Bechard, Joseph	First Assistant
Lapensee, Joseph	Inspector of English-French Schools
Springer, Georgina	Teacher
Curry, Miss F.	Teacher
Aherne, Irene	Teacher
Carroll, Lena	Teacher
Brown, Nina	Teacher
Malcolm, Ida G.	Teacher
Sunter, Bertha	Teacher
Nurse, Ethel	Teacher
Stirk, Harriet A.	Teacher
Panter, Erma	Teacher
Rierdon, Beatrice	Teacher
Handley, Viola	Teacher
Scott, Kathleen	Teacher
Coombe, Clare	Trained Nurse
Smith, Wilfred	Boys' Supervisor
Williams, Mrs. L. G.	Seamstress
Schofield, Anna B.	Domestic Science Teacher and Assistant Matron
McGuire, A. W.	Assistant Master
Uffen, J. F.	Principal Clerk
Thomson, C. W.	Senior Clerk
Riddell, B.	Clerk
Lyons, G.	Clerk
Sutton, M.	Clerk
Creighton, C. D.	Clerk
Spereman, P.	Library Assistant
Coleman, H. L.	Senior Clerk Stenographer
Brown, E. J.	Senior Clerk Stenographer
Ashall, A. E.	Senior Clerk Stenographer
Kerr, V. O.	Clerk Stenographer
Ward, S. Jane	Clerk Stenographer
Lyons, M. E.	Senior Clerk Stenographer
Horsley, V.	Senior Clerk Stenographer
Brown, A. M.	Senior Filing Clerk
Nesbitt, M.	Clerk Stenographer
Haughland, A.	Clerk Stenographer
Short, G.	Clerk Stenographer
Addy, M. R.	Clerk Stenographer
Arnoldi, G.	Clerk Stenographer
Kerr, M. E.	Clerk Stenographer

ATTORNEY GENERAL.—*Continued.*

Branch or Office.	Salary.		Date of Certificate.
Ontario Provincial Police Force	$1,400 00	per annum	Oct. 14
Ontario Provincial Police Force	1,400 00	"	Oct. 14
Ontario Provincial Police Force	1,400 00	"	Oct. 14
Land Titles	775 00	"	Oct. 20

EDUCATION.

Branch or Office.	Salary.		Date of Certificate.
Normal School, Peterborough	$950 00	per annum	Dec. 17
Public Libraries	800 00	"	Dec. 22
Ontario School for the Deaf, Belleville	1,000 00	"	Dec. 31
Normal School, Stratford	900 00	"	Jan. 16
	1,200 00	"	Feb. 25
Industrial and Technical Education	3,500 00	"	Feb. 25
Normal School, North Bay	900 00	"	Mar. 25
Deputy Minister	950 00	"	Apr. 1
Industrial and Technical Education	3,500 00	"	Apr. 21
Ontario School for the Deaf, Belleville	1,000 00	"	Apr. 21
	2,500 00	"	May 7
	2,500 00	"	May 14
Ontario School for the Blind, Brantford	75 00	per month	May 27
Industrial and Technical Education	2,000 00	per annum	June 14
	3,000 00	"	June 21
Ontario School for the Deaf, Belleville	1,200 00	"	July 20
Ontario School for the Deaf, Belleville	1,200 00	"	July 20
Ontario School for the Deaf, Belleville	1,050 00	"	July 29
	1,200 00	"	July 30
English-French Training School, Sturgeon Falls	2,500 00	"	Aug. 7
	3,000 00	"	Aug. 13
Ontario School for the Deaf, Belleville	1,000 00	"	Aug. 20
Ontario School for the Deaf, Belleville	1,100 00	"	Aug. 20
Ontario School for the Deaf, Belleville	1,200 00	"	Aug. 20
Ontario School for the Deaf, Belleville	1,200 00	"	Aug. 20
Ontario School for the Deaf, Belleville	1,100 00	"	Aug. 20
Ontario School for the Deaf, Belleville	1,100 00	"	Aug. 21
Ontario School for the Deaf, Belleville	1,100 00	"	Aug. 21
Ontario School for the Deaf, Belleville	1,200 00	"	Aug. 21
Ontario School for the Deaf, Belleville	1,100 00	"	Aug. 21
Ontario School for the Deaf, Belleville	1,100 00	"	Aug. 21
Ontario School for the Deaf, Belleville	1,100 00	"	Aug. 21
Ontario School for the Deaf, Belleville	1,200 00	"	Aug. 21
Ontario School for the Deaf, Belleville	1,100 00	"	Aug. 21
Ontario School for the Deaf, Belleville	1,000 00	"	Aug. 21
Ontario School for the Deaf, Belleville	1,100 00	"	Aug. 21
Ontario School for the Deaf, Belleville	400 00	"	Aug. 23
Ontario School for the Deaf, Belleville	1,300 00	"	Aug. 30
Normal Model School, Ottawa	1,800 00	"	Sept. 2
	2,100 00	"	Sept. 3
	1,600 00	"	Sept. 3
	1,500 00	"	Sept. 3
	1,200 00	"	Sept. 3
	1,200 00	"	Sept. 3
	1,500 00	"	Sept. 3
	1,100 00	"	Sept. 3
	1,100 00	"	Sept. 3
	1,100 00	"	Sept. 3
	1,100 00	"	Sept. 3
	975 00	"	Sept. 3
	975 00	"	Sept. 3
	1,100 00	"	Sept. 3
	1,100 00	"	Sept. 3
	1,100 00	"	Sept. 3
	900 00	"	Sept. 3
	975 00	"	Sept. 3
	975 00	"	Sept. 3
	900 00	"	Sept. 3
	975 00	"	Sept. 3
	900 00	"	Sept. 3

DEPARTMENT OF

Name.	Position.
Brill, L. F. C.	Clerk Stenographer
Bright, O. M.	Clerk Stenographer
Foy, M.	Clerk Stenographer
Crighton, D.	Clerk Typist
Ferguson, D.	Clerk Typist
Drew, M. K.	Clerk Typist
Truax, U.	Clerk Typist
Sheinert, L.	Junior Clerk Stenographer
Dexter, I. P.	Clerk Typist
Dies, Lila	Clerk Typist
Charbonneau, L.	Junior Clerk Typist
Burns, K.	Junior Clerk
Brown, I. E.	Junior Clerk
Dilks, M. E.	Junior Clerk Typist
Humphrey, A.	Senior Clerk Messenger
Trowell, E.	Fireman
Worley, William	Fireman
Hopkins, G.	Fireman
Cormack, J.	Cleaner and Helper
Marshall, E.	Janitress
Sinclair, Dr. S. B.	Special Lecturer
Scott, David W.	Farmer and Gardener
Lee, Margaret	School Nurse
Jordan, John C.	Teacher
Johnson, George S.	Principal
Rockett, Walter	Porter and Messenger
Hunt, Ella	School Nurse
Park, A. J.	Instructor in Writing
Bannister, John A.	English Master
Tindall, Hilliary B	Boys' Supervisor
Molesworth, Eva	Junior Clerk
Black, Gladys M.	Clerk Stenographer
Brown, Percy W.	District Public School Inspector
Lewis, C. F.	Fireman

DEPARTMENT OF GAME

Gladman, C. G.	Clerk
Quinn, F. S.	Clerk
Lee, William	Bookkeeper
Douse, G. P.	Senior Clerk
Lovelock, Miss G.	Filing Clerk
Boyd, Miss G. C.	Junior Clerk Stenographer
Fraser, A. Edward	Warden
Fleming, John	Warden
Parks, G. M.	Warden
Martin, William H.	Overseer
York, Joseph	Overseer
Ely, Henry R. A.	Special Patrol Officer
Mulligan, Joseph	Overseer
Carson, Robert W.	Special Patrol Officer
Revill, Percy	Special Patrol Officer
Stevenson, Peter	Special Patrol Officer
Irwin, David	Overseer
Foster, Richard G.	Overseer
Sebben, John	Overseer
Toole, Ira	Overseer
Kent, P. W.	Overseer
LaChapelle, Jos.	Overseer
Laughlin, J. H.	Overseer
McGregor, F. J.	Overseer
Kerr, C. J.	Overseer
Ward, Donald	Overseer
Cummins, J. H.	Overseer
Phillips, J. H.	Special Patrol Officer
Toner, George	Special Patrol Officer
Johnston, John A.	Overseer

EDUCATION.—*Continued.*

Branch or Office.	Salary.		Date of Certificate.
	$975 00	per annum	Sept. 3
	1,050 00	"	Sept. 3
	975 00	"	Sept. 3
	900 00	"	Sept. 3
	975 00	"	Sept. 3
	900 00	"	Sept. 3
	900 00	"	Sept. 3
	850 00	"	Sept. 3
	900 00	"	Sept. 3
	975 00	"	Sept. 3
	850 00	"	Sept. 3
	850 00	"	Sept. 3
	850 00	"	Sept. 3
	850 00	"	Sept. 3
	1,200 00	"	Sept. 3
Normal Model School, Toronto	1,200 00	"	Sept. 3
Normal Model School, Toronto	1,200 00	"	Sept. 3
Normal Model School, Toronto	1,200 00	"	Sept. 3
Normal Model School, Toronto	1,200 00	"	Sept. 3
Normal Model School, Toronto	850 00	"	Sept. 3
	3,000 00	"	Sept. 15
Ontario School for the Blind, Brantford	1,200 00	"	Sept. 18
	125 00	per month	Sept. 21
Normal Model School, Toronto	1,800 00	per annum	Sept. 23
Northern Academy, Monteith	3,600 00	"	Sept. 24
Ontario School for the Blind, Brantford	1,044 00	"	Sept. 24
	125 00	per month	Sept. 24
Normal School, Hamilton	600 00	per annum	Sept. 28
Normal School, North Bay	3,000 00	"	Oct. 1
Ontario School for the Blind, Brantford	990 00	"	Oct. 4
	1,000 00	"	Oct. 21
	975 00	"	Oct. 21
	3,000 00	"	Oct. 25
Ontario School for the Blind, Brantford	1,100 00	"	Oct. 27

AND FISHERIES

Branch or Office.	Salary.		Date of Certificate.
	$1,600 00	per annum	Nov. 27
Sales Branch	1,500 00	"	Dec. 22
	1,200 00	"	Jan. 17
	1,700 00	"	Sept. 3
	925 00	"	Sept. 3
	850 00	"	Sept. 3
	2,000 00	"	Sept. 7
	2,000 00	"	Sept. 7
	2,000 00	"	Sept. 7
	1,200 00	"	Sept. 16
	1,200 00	"	Sept. 16
	1,400 00	"	Sept. 16
	1,400 00	"	Sept. 16
	1,400 00	"	Sept. 16
	1,400 00	"	Sept. 16
	1,400 00	"	Sept. 18
	1,400 00	"	Sept. 22
	1,400 00	"	Sept. 22
	1,100 00	"	Oct. 2
	1,100 00	"	Oct. 2
	1,100 00	"	Oct. 2
	1,100 00	"	Oct. 2
	1,100 00	"	Oct. 2
	1,100 00	"	Oct. 2
	1,100 00	"	Oct. 2
	1,100 00	"	Oct. 2
	1,100 00	"	Oct. 2
	1,200 00	"	Oct. 2
	1,200 00	"	Oct. 2
	1,100 00	"	Oct. 2

DEPARTMENT OF GAME

Name.	Position.
Root, S.	Overseer
Moore, J. R.	Overseer
Read, W. A.	Overseer
Lyons, I. J.	Overseer
Drew, G. M.	Overseer
Free, G. H.	Overseer
McClelland, S. J.	Overseer
Jones, C. L.	Overseer
Graham, J. J.	Overseer
Chauvin, Victor	Overseer
McNaughton, Neil	Overseer
Ashford, John W.	Overseer
Hornett, William	Overseer
Finlay, W. J.	Overseer
Bowland, C. W.	Overseer
Carten, F. D.	Overseer
Windsor, R. D.	Overseer
Leach, G. S.	Overseer
Wrigley, William H.	Overseer
Phillipin, P. H.	Overseer

DEPARTMENT OF

Riddell, W. A.	Deputy Minister
Bogue, Miss F. J. C.	Clerk and Stenographer
Smith, Zoe B.	Private Secretary
Sparks, Dr. George L.	District Officer of Health, District No. 7
Edgar, Robert	Clerk
Findlay, James A.	Inspector
Edgar, Robert	Clerk
Knox, Beryl	Assistant Director of Maternal and Child Welfare Division
Power, Mary	Director of Maternal and Child Welfare Division
Guyatt, Dr. B. L.	Clinical Specialist, Division of Venereal Diseases
McClenahan, Dr. R. R.	Director, Division of Venereal Diseases
Lancaster, H. M.	Director of Laboratories
Anderson, Dr. C. M.	Provincial Analyst
Bell, Dr. W. J.	Pediatrician, Maternal and Child Welfare Division
Stevenson, Hugh	Inspector
Douglas, Dr. J. S.	Director of the Laboratory, North Bay
Wessels, Marguerite	Director of the Laboratory, Sault Ste. Marie
Richardson, John	Sanitary Inspector
Gipson, Mary O.	District Nurse, Maternal and Child Welfare and Public Health Nursing Division
Smith, H. Elizabeth	District Nurse, Maternal and Child Welfare and Public Health Nursing Division
Foy, Mary I.	District Nurse, Maternal and Child Welfare and Public Health Nursing Division
Vrooman, Laura W.	District Nurse, Maternal and Child Welfare and Public Health Nursing Division
Cunningham, Dr. J. G.	Director, Division of Industrial Hygiene
Osborne, Miss K. E.	District Nurse, Maternal and Child Welfare and Public Health Nursing Division
Linton, Alice	District Nurse, Maternal and Child Welfare and Public Health Nursing Division
Carr Harris, Silla M.	District Nurse, Maternal and Child Welfare and Public Health Nursing Division
Burns, Gladys	District Nurse, Maternal and Child Welfare and Public Health Nursing Division
McKee, David	Sanitary Inspector
Spinks, Sarah E.	Clerk
Berry, Albert E.	Assistant Sanitary Engineer
Bagshaw, F. May	District Nurse, Maternal and Child Welfare and Public Health Nursing Division.

AND FISHERIES.—*Continued.*

Branch or Office.	Salary.		Date of Certificate.
	$1,100 00	per annum	Oct. 2
	1,100 00	"	Oct. 5
	1,100 00	"	Oct. 5
	1,100 00	"	Oct. 5
	1,100 00	"	Oct. 5
	1,100 00	"	Oct. 5
	1,100 00	"	Oct. 5
	1,100 00	"	Oct. 5
	1,100 00	"	Oct. 5
	1,400 00	"	Oct. 8
	1,100 00	"	Oct. 9
	1,100 00	"	Oct. 9
	1,100 00	"	Oct. 9
	1,100 00	"	Oct. 9
	1,100 00	"	Oct. 9
	1,100 00	"	Oct. 9
	1,100 00	"	Oct. 9
	1,100 00	"	Oct. 26
	1,100 00	"	Oct. 27
	1,100 00	"	Oct. 27

LABOUR.

Branch or Office.	Salary.		Date of Certificate.
	$3,500 00	per annum	Nov. 18
Ontario Government Public Employment Bureau, Toronto	900 00	"	Jan. 19
Minister's Office	100 00	per month	Jan. 20
Provincial Board of Health	3,000 00	per annum	Feb. 6
Ontario Government Public Employment Bureau, Toronto	1,700 00	"	Feb. 18
Boiler Inspection	1,700 00	"	Feb. 19
Ontario Government Public Employment Bureau, Toronto	1,750 00	"	Mar. 1
Provincial Board of Health	1,600 00	"	May 29
Provincial Board of Health	2,000 00	"	May 29
Provincial Board of Health	3,500 00	"	May 29
Provincial Board of Health	3,500 00	"	May 29
Provincial Board of Health	3,500 00	"	June 2
Provincial Board of Health	2,850 00	"	June 2
Provincial Board of Health	3,500 00	"	June 4
Factory Inspection	1,900 00	"	June 10
Provincial Board of Health	2,000 00	"	June 14
Provincial Board of Health	2,000 00	"	June 14
Provincial Board of Health	1,500 00	"	June 14
Provincial Board of Health	125 00	per month	June 15
Provincial Board of Health	125 00	"	June 17
Provincial Board of Health	125 00	"	June 17
Provincial Board of Health	125 00	"	June 17
Provincial Board of Health	3,500 00	per annum	June 21
Provincial Board of Health	125 00	per month	June 21
Provincial Board of Health	125 00	"	June 21
Provincial Board of Health	125 00	"	June 21
Provincial Board of Health	125 00	"	June 21
Provincial Board of Health	1,500 00	per annum	June 23
	800 00	"	July 3
Provincial Board of Health	1,800 00	"	July 7
Provincial Board of Health	125 00	per month	July 23

DEPARTMENT OF

Name.	Position.
Moseley, Charles	Assistant to Chairman of Board
Porter, G. W.	Inspector
Middleton, Dr. J. J.	Assistant Physician, Division of Venereal Diseases
McClure, A.	Laboratory Assistant
Matthews, G.	Laboratory Assistant
Chambers, C. C.	Senior Clerk Stenographer
Sumner, E. S.	Clerk Stenographer
Partridge, J.	Clerk Stenographer
Hollinger, R. W.	Laboratory Attendant
McCullough, John M.	Senior Account Clerk
Moore, Edna L.	Nurse, Division of Venereal Diseases
Roberts, D. M.	Clerk Stenographer
McComb, S.	Clerk Typist
McGhie, C. I.	Clerk Stenographer
Strong, M. K.	Principal Clerk
Davids, Rupert	Senior Clerk Stenographer
Armstrong, H. B.	Senior Statistical Clerk
Taylor, C. W.	Senior Clerk
Cameron, W. H.	Clerk
Eakins, R. C.	Clerk
Ramsden, C. H.	Senior Clerk
King, C. W.	Clerk
Bowles, A. C.	Senior Clerk
Williams, L. J.	Telephone Operator
Taylor, A. W.	Superintendent, Grade 3
Bogue, G. L.	Junior Clerk
Ahlquist, Signe	Clerk Stenographer
Ford, C. S.	Superintendent, Grade 2
Johnson, J. R.	Clerk
MacDougall, Neil	Superintendent, Grade 3
Peacock, W. J.	Superintendent, Grade 3
Hotson, A. C. F.	Superintendent, Grade 3
Cooper, A. J.	Superintendent, Grade 3
Fraser, M.	Junior Clerk
Magwood, M.	Clerk Stenographer
Galpine, Freda	Clerk Stenographer
Wands, G. W.	Superintendent, Grade 3
Tompkins, E.	District Field Secretary
Frisby, Walter G.	Executive Secretary
Graham, Mrs. G. M.	Investigator
Bruce, Alex. G.	Investigator
Abernethy, Mary M.	Investigator
Wessels, Marguerite L.	Assistant Bacteriologist
West, J. Pender	Factory Inspector and Examiner of Reports and Designs
Burgess, Marjorie	Statistical Clerk, Maternal and Child Welfare Division.

LABOUR.—*Continued.*

Branch or Office.	Salary.		Date of Certificate.
Stationary and Hoisting Engineers	$2,200 00	per annum	Aug. 7
Stationary and Hoisting Engineers	1,700 00	“	Aug. 7
Provincial Board of Health	3,500 00	“	Aug. 16
Provincial Board of Health	1,200 00	“	Sept. 3
Provincial Board of Health	1,200 00	“	Sept. 3
Provincial Board of Health	1,200 00	“	Sept. 3
Provincial Board of Health	975 00	“	Sept. 3
Provincial Board of Health	900 00	“	Sept. 3
Provincial Board of Health	1,200 00	“	Sept. 3
Mothers' Allowances Commission	1,800 00	“	Sept. 7
Provincial Board of Health	125 00	per month	Sept. 7
Boiler Inspection	1,050 00	per annum	Sept. 8
Stationary and Hoisting Engineers	900 00	“	Sept. 8
Stationary and Hoisting Engineers	975 00	“	Sept. 8
	2,100 00	“	Sept. 8
	1,200 00	“	Sept. 8
	1,600 00	“	Sept. 8
Ontario Government Public Employment Bureau, Toronto	1,600 00	“	Sept. 8
Ontario Government Public Employment Bureau, Toronto	1,400 00	“	Sept. 8
Ontario Government Public Employment Bureau, Toronto	1,400 00	“	Sept. 8
Ontario Government Public Employment Bureau, Toronto	1,500 00	“	Sept. 8
Ontario Government Public Employment Bureau, Toronto	1,300 00	“	Sept. 8
Ontario Government Public Employment Bureau, Toronto	1,600 00	“	Sept. 8
Ontario Government Public Employment Bureau, Toronto	850 00	“	Sept. 8
Ontario Government Public Employment Bureau, Guelph	1,500 00	“	Sept. 8
Ontario Government Public Employment Bureau, Toronto	1,000 00	“	Sept. 8
Ontario Government Public Employment Bureau, Toronto	900 00	“	Sept. 8
Ontario Government Public Employment Bureau, Ottawa	1,900 00	“	Sept. 8
Ontario Government Public Employment Bureau, Ottawa	1,500 00	“	Sept. 8
Ontario Government Public Employment Bureau, Sault Ste. Marie	1,600 00	“	Sept. 8
Ontario Government Public Employment Bureau, St. Thomas	1,500 00	“	Sept. 8
Ontario Government Public Employment Bureau, Toronto	1,600 00	“	Sept. 8
Ontario Government Public Employment Bureau, Windsor	1,600 00	“	Sept. 8
Ontario Government Public Employment Bureau, Hamilton	1,100 00	“	Sept. 8
Ontario Government Public Employment Bureau, Toronto	900 00	“	Sept. 8
Ontario Government Public Employment Bureau, Toronto	900 00	“	Sept. 8
Ontario Government Public Employment Bureau, Chatham	1,300 00	“	Sept. 8
Ontario Government Public Employment Bureau, Toronto	1,000 00	“	Sept. 8
Mothers' Allowances Commission	3,000 00	“	Sept. 13
Mothers' Allowances Commission	1,500 00	“	Sept. 16
Mothers' Allowances Commission	1,500 00	“	Sept. 16
Mothers' Allowances Commission	1,500 00	“	Sept. 17
Provincial Board of Health	2,000 00	“	Sept. 24
Factory Inspection	2,200 00	“	Sept. 28
Provincial Board of Health	1,200 00	“	Sept. 28

DEPARTMENT OF

Name.	Position.
Graham, Dr. N. F. W.	Director of the Laboratory, Sault Ste. Marie
Fallows, Sidney N.	Clerk
Ruth, Martha Irene	Junior Clerk Stenographer
Hunt, Dr. J. W.	Clinical Specialist, Division of Venereal Diseases
Johnston, Dr. Hugh W	District Officer of Health
Marriott, Dorothy	Junior Clerk Typist
Brown, James M.	Chairman
Millar, William C.	Sanitary Inspector

DEPARTMENT OF

Graham, G. E. H.	Clerk
Trivett, W. F.	Clerk
Sinton, James	Engineer and Draftsman
Samuels, Fred	Clerk
Niven, F. J.	Minister's Secretary and Secretary to the Department.
Dicker, Clarence L	Clerk
Ferguson, Jessie	Stenographer
Van Horn, Lorne E	Assistant Homestead Inspector
Titus, F. E.	Law Clerk
O'Flaherty, T. F.	Crown Lands Agent
Jarvis, Henry F. J. W	Homestead Inspector for District of Parry Sound
Fleming, E.	Junior Clerk
Carefoot, O	Clerk Stenographer
Caldwell, G.	Clerk Stenographer
McCort, J. C.	Clerk Stenographer
Beley, B.	Clerk Stenographer
Bindon, F. W.	Clerk

DEPARTMENT

Smith, Hugh C.	Cartographer
O'Flaherty, T. F.	Mining Recorder
Atchie, Barbara	Filing Clerk
Graham, G. E. H.	Filing Clerk
Cole, George E.	Inspector of Mines
McFarland, J. F.	Junior Clerk
Watson, Charles G.	Draftsman
Webster, Arthur R	Assistant Inspector of Mines
Farrington, James	Private Secretary
Burn, Benjamin D	Natural Gas Inspector

DEPARTMENT OF THE

MacMillan, Myrtle	Head Nurse
Graham, Dr. R. C.	Assistant Medical Officer
Denison, Walter W.	Law Clerk
Lavell, Alfred E.	Parole Officer
Johnston, Dorothy L.	Clerk and Stenographer
Courtney, Gladys	Stenographer
Cumberland, Dr. T.	Assistant Superintendent
Forster, Dr. James	Superintendent
Crichton, Colin D.	Clerk
Crawford, W. J.	Audit Clerk
Carson, Thomas	Provincial License Inspector
McCallum, Lottie	Stenographer
Taber, F. B.	License Inspector
Connor, W. J.	Provincial Officer
MacMurchy, Dr. Helen	Inspector of Public Institutions
Adams, E. Elisha	Provincial Officer
MacLachlan, D.	Engineer
Graham, Bertha S. A.	Stenographer
Ridgley, John	Third Engineer
Harvey, Frederick Neave	Fireman

LABOUR.—*Continued.*

Branch or Office.	Salary.	Date of Certificate.
Provincial Board of Health	$2,000 00 per annum	Sept. 28
Ontario Government Public Employment Bureau, Toronto	1,300 00 "	Oct. 5
Ontario Government Public Employment Bureau, Peterborough	700 00 "	Oct. 7
Provincial Board of Health	3,500 00 "	Oct. 20
Provincial Board of Health	3,500 00 "	Oct. 20
Factory Inspection	850 00 "	Oct. 25
Board of Stationary and Hoisting Engineers	2,550 00 "	Oct. 27
Provincial Board of Health	1,500 00 "	Oct. 29

LANDS AND FORESTS.

Branch or Office.	Salary.	Date of Certificate.
Records	$1,200 00 per annum	Nov. 28
Woods and Forests	1,800 00 "	Dec. 3
Northern Development	2,200 00 "	Dec. 23
Records	1,300 00 "	Dec. 23
	2,500 00 "	Dec. 23
Northern Development	1,300 00 "	Dec. 23
Woods and Forests	800 00 "	Jan. 8
	120 00 per month	Jan. 20
	2,900 00 per annum	Mar. 12
	600 00 "	May 6
	1,400 00 "	May 22
Northern Development	1,100 00 "	Sept. 3
Northern Development	1,050 00 "	Sept. 3
Northern Development	900 00 "	Sept. 3
Woods and Forests	975 00 "	Sept. 3
Minister's Office	1,050 00 "	Sept. 3
Lands	1,600 00 "	Oct. 26

OF MINES.

Branch or Office.	Salary.	Date of Certificate.
	$1,700 00 per annum	Dec. 6
	1,050 00 "	May 6
	800 00 "	June 22
	1,300 00 "	June 22
	3,000 00 "	July 31
	925 00 "	Sept. 3
Mining Recorder's, North Bay	1,800 00 "	Oct. 23
	3,000 00 "	Oct. 26
	1,600 00 "	Oct. 26
	1,800 00 "	Oct. 26

PROVINCIAL SECRETARY.

Branch or Office.	Salary.	Date of Certificate.
Ontario Hospital, Kingston	$1,000 00 per annum	Nov. 28
Ontario Hospital, Hamilton	1,600 00 "	Dec. 4
Assistant Provincial Secretary	2,400 00 "	Dec. 8
Inspection Public Institutions	3,000 00 "	Dec. 8
Board of License Commissioners for Ontario	850 00 "	Dec. 15
Inspection Public Institutions	850 00 "	Dec. 23
Ontario Hospital, Whitby	1,800 00 "	Jan. 6
Ontario Hospital, Whitby	3,000 00 "	Jan. 6
Assistant Provincial Secretary	1,000 00 "	Jan. 7
Housing Branch	1,600 00 "	Jan. 10
Board of License Commissioners for Ontario	1,500 00 "	Jan. 12
Neglected Children	750 00 "	Jan. 23
Board of License Commissioners for Ontario	1,800 00 "	Feb. 6
Board of License Commissioners for Ontario	1,400 00 "	Feb. 10
Inspection Public Institutions	2,800 00 "	Feb. 12
Board of License Commissioners for Ontario	1,300 00 "	Feb. 12
Industrial Farm Burwash	1,200 00 "	Feb. 17
Board of License Commissioners for Ontario	900 00 "	Feb. 27
Ontario Hospital, Whitby	1,200 00 "	Feb 27
Ontario Hospital, Whitby	900 00 "	Feb 27

Name.	Position.
Brown, Edward	Utility Engineer
Walton, Holland	Fireman
Short, John Milton	Bursar
Thorndyke, R. E. C.	Assistant Plumber
Aitken, Adam	Fireman
Crawforth, Wilfred M.	Second Engineer
Wallace, John William	Teamster
Bird, William John	Chief Engineer
Jones, Thomas Burbank	Gardener
Harris, Alfred	Fireman
Forster, Joseph F.	Plumber
Howard, Arthur B.	Painter
Percy, William H.	Electrician
Greenaway, Thomas A.	Carpenter
MacPherson, Margaret	Stenographer
Whitney, Seymour	Carpenter
Crouch, Thomas	Foreman, Stables and Transportation
Montgomery, A. A.	License Inspector
Cain, Nellie V.	Filing Clerk
Webb, Edmund	Bursar
Williams, B. Henry	Storekeeper and Clerk
Spence, H. J.	Bursar
Kaiser, Dr. N. W.	Physician
Blea, William	Clerk
Govan, James	Architect
Thompson, John	Clerk
Williams, George N.	Chief Draftsman
Fletcher, Dr. D. R.	Physician
Clare, Dr. Harvey	Medical Director of Ontario Hospitals
Martin, Robert	Inspector
Leavine, Dr. S. F.	Assistant Medical Officer
Day, Dr. E. A. F.	Assistant Medical Officer
McMahon, W.	Engineer
Lougher, Dr. F. H.	Assistant Medical Officer
Adams, E. Elisha	License Inspector
McDermott, E. C.	School Teacher
Abraham, Dr. A. H.	Assistant Medical Officer
Dickson, John W.	License Inspector
McIntyre, M.	Clerk Stenographer
Montgomery, Ray	Clerk Stenographer
Mitchell, A. E.	Clerk
Allen, M. I.	Clerk Typist
Halley, D.	Clerk Stenographer
White, M.	Clerk Typist
Adams, S.	Clerk
Johnson, C. H.	Clerk
McDonald, L. J.	Clerk Typist
Port, F. M.	Junior Clerk
Stout, F. E.	Clerk Typist
Foster, Grace	Filing Clerk
George, C. H.	Clerk
Hoolihan, J. J.	Secretary to Director
Smith, R. L.	Clerk
Shaw, J. M.	Senior Investigator
McJannett, W. J.	Supervising Electrician
Barron, G.	Supervising Plumber
Scott, S.	Junior Clerk Stenographer
Abernethy, M.	Junior Clerk Stenographer
McBain, R. M.	Clerk Stenographer
Law, Jack	Junior Clerk
Fullerton, F. E.	Junior Clerk Stenographer
Maynard, Leota C.	Stenographer
Boyd, Effie B.	Clerk Stenographer
Moyle, Dr. Henry B.	Assistant Physician
Crawford, W. J.	Senior Account Clerk
Bryan, Ruth G.	Head Nurse

PROVINCIAL SECRETARY.—*Continued.*

Branch or Office.	Salary.	Date of Certificate.
Ontario Hospital, Whitby	$1,020 00 per annum	Feb. 27
Ontario Hospital, Whitby	900 00 "	Feb. 27
Ontario Hospital, Whitby	1,800 00 "	Feb. 27
Ontario Hospital, Whitby	900 00 "	Feb. 27
Ontario Hospital, Whitby	660 00 "	Feb. 27
Ontario Hospital, Whitby	1,200 00 "	Feb. 27
Ontario Hospital, Whitby	540 00 "	Feb. 27
Ontario Hospital, Whitby	1,500 00 "	Feb. 27
Ontario Hospital, Whitby	1,020 00 "	Feb. 27
Ontario Hospital, Whitby	900 00 "	Feb. 27
Ontario Hospital, Whitby	1,100 00 "	Feb. 27
Ontario Hospital, Whitby	1,050 00 "	Feb. 27
Ontario Hospital, Whitby	1,200 00 "	Feb. 27
Ontario Hospital, Whitby	1,100 00 "	Feb. 27
Ontario Hospital, Whitby	850 00 "	Feb. 27
Ontario Hospital, Whitby	1,100 00 "	Feb. 27
Ontario Hospital, Whitby	90 00 per month	Mar. 17
Board of License Commissioners for Ontario	1,500 00 per annum	Mar. 17
Inspection Public Institutions	850 00 "	Mar. 23
Ontario Hospital, London	1,700 00 "	Mar. 30
Ontario Reformatory Industries, Guelph	30 00 per week	Apr. 9
Ontario Hospital, Cobourg	1,800 00 per annum	May 10
Ontario Hospital, Hamilton	1,500 00 "	May 28
Inspection Public Institutions	1,250 00 "	May 28
Inspection Public Institutions	3,300 00 "	June 10
Inspection Public Institutions	1,300 00 "	June 10
Inspection Public Institutions	2,150 00 "	June 10
Ontario Hospital, Brockville	1,500 00 "	June 10
Public Institutions	4,000 00 "	June 16
Neglected Children	1,800 00 "	June 14
Ontario Hospital, Brockville	1,500 00 "	June 21
Ontario Hospital, London	1,500 00 "	June 24
Ontario Hospital, Whitby	100 00 per month	June 24
Ontario Hospital, Mimico	1,500 00 per annum	July 20
Board of License Commissioners for Ontario	1,500 00 "	July 27
Industrial Farm, Burwash	1,500 00 "	Aug. 17
Ontario Hospital, Cobourg	1,500 00 "	Aug. 19
Board of License Commissioners for Ontario	1,500 00 "	Aug. 23
Minister's Office	1,050 00 "	Sept. 3
Minister's Office	1,050 00 "	Sept. 3
Registrar General	1,200 00 "	Sept. 3
Registrar General	900 00 "	Sept. 3
Registrar General	900 00 "	Sept. 3
Registrar General	900 00 "	Sept. 3
Registrar General	1,300 00 "	Sept. 3
Registrar General	1,200 00 "	Sept. 3
Registrar General	900 00 "	Sept. 3
Registrar General	925 00 "	Sept. 3
Registrar General	900 00 "	Sept. 3
Registrar General	925 00 "	Sept. 3
Registrar General	1,200 00 "	Sept. 3
Bureau of Municipal Affairs	2,000 00 "	Sept. 3
Bureau of Municipal Affairs	1,500 00 "	Sept. 3
Inspection Public Institutions	2,000 00 "	Sept. 3
Inspection Public Institutions	1,800 00 "	Sept. 3
Inspection Public Institutions	1,800 00 "	Sept. 3
Inspection Public Institutions	850 00 "	Sept. 3
Assistant Provincial Secretary	775 00 "	Sept. 3
Assistant Provincial Secretary	1,050 00 "	Sept. 3
Assistant Provincial Secretary	775 00 "	Sept. 3
Housing Branch	850 00 "	Sept. 3
Board of License Commissioners for Ontario	850 00 "	Sept. 7
Andrew Mercer Reformatory	900 00 "	Oct. 1
Ontario Hospital, Mimico	2,200 00 "	Oct. 14
Bureau of Municipal Affairs	1,600 00 "	Oct. 27
Ontario Hospital, Whitby	1,300 00 "	Oct. 28

DEPARTMENT OF

Name.	Position.
Purvis, Miss E.	Private Secretary
McNee, Robert	Storekeeper
Dobbs, H.	Building Inspector
Phair, E.	Watchman
Whyte, J.	Cleaner and Helper
Bryan, M.	Cleaner and Helper
Roberts, R. J.	Architectural Draftsman
Blyth, Alex	Draftsman
Gillis, D. B.	Clerk Stenographer
Wood, Sydney	Account Clerk
Ryves, T.	Inspector of Works
Smith, A. C.	Account Clerk
Spall, S. J.	Clerk of Works and Superintendent of Construction
Bale, George T	Assistant Stationary Engineer
Carroll, J.	Cleaner and Helper

DEPARTMENT OF

Moore, Henry J.	Highway Forester
Garthwaite, C. W.	Clerk
Callaghan, G. V.	Clerk Typist
Watts, H. A.	Office Appliance Operator
Cosby, N. W.	Senior Clerk
Lindsay, K.	Filing Clerk
Martin, F. J.	Clerk
Huyck, Miss D.	Senior Clerk Stenographer
Beemer, H. M.	Senior Clerk Stenographer
Ledingham, J.	Draftsman
Anderson, C. H.	Valuator
Davis, H. E.	Testing Engineer
Kemp, Mrs. E.	Clerk Stenographer
Hay, A.	Draftsman
Crealock, A. B.	Draftsman
Cornell, C. W.	Inspecting Engineer and Bridge Draftsman
Carson, M. E.	Junior Clerk Stenographer
Smith, A.	Senior Clerk Bookkeeper
Fox, E. D.	Clerk
Hallett, N.	Clerk
Jones, L. E.	Assistant Highway Engineer
Love, L. E.	Machinery Inspector
Reid, E. K.	Clerk Stenographer
Burwash, N. A.	Surveyor and Draftsman
Allen, W. T.	Senior Clerk Messenger
Howard, M.	Clerk Typist
Starr, E. E.	Clerk Stenographer
Tamblyn, C.	Junior Clerk Typist
Warney, M. W.	Junior Clerk Typist
Zoller, J. L.	Clerk
Hill, Helen J.	Junior Clerk Typist
Mitchell, Arthur E.	Clerk
Allen, Harold	Clerk

DEPARTMENT OF

Cassels, Caroline	Member
Hurst, O. C. M.	Assistant Director
Matthews, Charles A.	Assistant Treasurer
Jones, George J. L.	Secretary to Minister and Departmental Secretary
Allen, Leta	Clerk Stenographer
Leonard, J. H.	Assistant Inspector of Theatres
Boal, H. R.	Assistant Inspector of Theatres
Burtt, G. E.	Senior Clerk
Woodburn, E.	Assistant Inspector of Theatres
Rouselle, Eleza	Clerk Stenographer
King, Olga A.	Clerk Typist
Severn, F.	Field Man
Mogan, Gertrude	Clerk Stenographer

PUBLIC WORKS.

Branch or Office.	Salary.	Date of Certificate.
Minister's Office	$1,200 00 per annum	Dec. 31
Ontario Hospital, Whitby	1,200 00 “	Mar. 3
Ontario School for the Deaf, Belleville	6 00 per diem	Apr. 8
Parliament and Departmental Buildings' Staff	1,200 00 per annum	Sept. 3
Parliament and Departmental Buildings' Staff	1,200 00 “	Sept. 3
Parliament and Departmental Buildings' Staff	1,200 00 “	Sept. 3
Architect's Office	1,400 00 “	Sept. 3
Architect's Office	1,700 00 “	Sept. 3
Architect's Office	900 00 “	Sept. 3
Architect's Office	1,300 00 “	Sept. 3
Architect's Office	1,800 00 “	Sept. 3
Accountant's Office	1,200 00 “	Sept. 3
Ontario Hospital, Whitby	2,500 00 “	Sept. 3
Parliament and Departmental Buildings' Staff	1,500 00 “	Oct. 25
Parliament and Departmental Buildings' Staff	1,200 00 “	Oct. 27

PUBLIC HIGHWAYS.

	$3,000 00 per annum	May 52
	1,600 00 “	Aug. 19
	900 00 “	Sept. 3
	1 000 00 “	Sept. 3
	1,600 00 “	Sept. 3
	,925 00 “	Sept. 3
	1,400 00 “	Sept. 3
	1,100 00 “	Sept. 3
	1,100 00 “	Sept. 3
	1,700 00 “	Sept. 3
	2,550 00 “	Sept. 3
	2,000 00 “	Sept. 3
	975 00 “	Sept. 3
	1,700 00 “	Sept. 3
	1,800 00 “	Sept. 3
	2,400 00 “	Sept. 3
	850 00 “	Sept. 3
	1,800 00 “	Sept. 3
	1,400 00 “	Sept. 3
	1,400 00 “	Sept. 3
	2,550 00 “	Sept. 3
	1,800 00 “	Sept. 3
	975 00 “	Sept. 3
	2,000 00 “	Sept. 3
Motor Vehicles	1,200 00 “	Sept. 3
Motor Vehicles	900 00 “	Sept. 3
Motor Vehicles	1,050 00 “	Sept. 3
Motor Vehicles	850 00 “	Sept. 3
Motor Vehicles	850 00 “	Sept. 3
Motor Vehicles	1,400 00 “	Sept. 3
	850 00 “	Oct. 29
	1,300 00 “	Oct. 30
	1,200 00 “	Oct. 30

THE TREASURER.

Board of Censors of Moving Pictures	$1,500 00 per annum	Mar. 27
Moving Picture Branches	2,200 00 “	Aug. 19
	4,200 00 “	Aug. 31
	2,400 00 “	Aug. 31
Succession Duty	900 00 “	Sept. 3
Inspection of Theatres	1,700 00 “	Sept. 3
Inspection of Theatres	1,700 00 “	Sept. 3
Inspection of Theatres	1,600 00 “	Sept. 3
Inspection of Theatres	1,700 00 “	Sept. 3
Inspection of Theatres	900 00 “	Sept. 3
Inspection of Theatres	900 00 “	Sept. 3
Provincial Motion Picture Bureau	1,700 00 “	Sept. 3
Provincial Motion Picture Bureau	900 00 “	Sept. 3

DEPARTMENT OF

Name.	Position.
McLeod, Norman	Operator of Moving Picture Machine
Canning, Maude	Clerk Stenographer
Whelan, Agnes	Account Clerk
Lee, R. E.	Junior Clerk
Sheriff, Bonamy	Junior Clerk
Watson, F. M.	Clerk
Barthel, Verna C.	Junior Clerk Stenographer
Coles, Florence E.	Clerk Stenographer
Finnerty, Anna M.	Clerk Stenographer
Frame, Christina	Junior Clerk Stenographer
Shanahan, J. J.	Fire Investigator
Blake, Harry M.	Film Editor

AUDIT

Sillifant, M. DeB.	Clerk
Cochrane, Harry	Clerk
Watson, Charles V.	Audit Clerk
Harris, Charles F.	Audit Clerk
Chater, Harold J.	Audit Clerk
Woods, E. A.	Junior Clerk
Geddes, W. A.	Audit Clerk
Milne, James	Audit Clerk
Dignam, James H.	Audit Clerk
Lee, Howard F.	Audit Clerk
Scott, John	Audit Clerk

THE TREASURER (*Continued.*)

Branch or Office.	Salary.		Date of Certificate.
Board of Censors of Moving Pictures	$1,700 00	per annum	Sept. 3
Board of Censors of Moving Pictures	900 00	“	Sept. 3
King's Printer's	1,200 00	“	Sept. 3
Treasury	850 00	“	Sept. 3
Treasury	850 00	“	Sept. 3
Treasury	1,300 00	“	Sept. 3
Treasury	850 00	“	Sept. 3
Solicitor to Treasury	1,050 00	“	Sept. 3
Solicitor to Treasury	975 00	“	Sept. 3
Fire Marshal	850 00	“	Sept. 3
Fire Marshal	2,200 00	“	Sept. 3
Provincial Motion Picture Bureau	1,800 00	“	Oct. 27

OFFICE.

	$1,600 00	“	Nov. 28
	1,000 00	“	Jan. 8
	1,300 00	“	Sept. 3
	1,500 00	“	Sept. 3
	1,200 00	“	Sept. 3
	925 00	“	Sept. 3
	1,500 00	“	Sept. 3
	1,500 00	“	Sept. 3
	1,400 00	“	Sept. 3
	1,300 00	“	Sept. 3
	1,300 00	“	Sept. 3

CERTIFICATES ISSUED FOR

DURING THE FISCAL YEAR

DEPARTMENT OF THE PRIME MINISTER

Name.	Position.
Barker, Gladys E	Junior Clerk Stenographer
Travers, Edna	Stenographer
Trewin, Corinne	Clerk Stenographer
Kell, Mrs. M. M	Clerk Stenographer

DEPARTMENT OF

Name.	Position.
Cook, Milford F	Drainage Surveyor
Griffith, Emma	Stenographer
Clarry, A. Gordon	Enumerator
Martin, Fred	Assistant in mailing reports
Roberts, Herbert Alan	Office Boy
Boyes, Thomas F	Dairy Instructor
Smith, James B	Creamery Instructor and Sanitary Inspector, Western Ontario
McMillan, Donald	Creamery Instructor and Sanitary Inspector, Western Ontario
Gray, Robert T	Dairy Instructor
Howey, Hugh	Dairy Instructor
Echlin, J. H	Dairy Instructor
Clark, Fred	Dairy Instructor
Cheetham, S. S	Dairy Instructor
Buro, J	Dairy Instructor
Barker, George H	Dairy Instructor
Bensley, George	Dairy Instructor
MacKenzie, Geo. McK	Dairy Instructor
Gracey, Arthur E	Dairy Instructor
Thompson, Robert A	Dairy Instructor
Brown, Freeman	Dairy Instructor
McAllister, Joseph	Dairy Instructor
Norval, Charles W	Dairy Instructor
Wright, George F	Dairy Instructor
Nolan, Peter	Dairy Instructor
Mitchell, James A	Dairy Instructor
McKinley, Hugh A	Dairy Instructor
Linn, Charles	Dairy Instructor
Ward, Robert W	Dairy Instructor
Hicks, Thomas J	Dairy Instructor
Munro, Marjorie L	Stenographer
Lowe, Alice W	Stenographer
Mitchell, Joseph	Office Boy
Harris, Maud M	Stenographer
Shaver, E. O	Clerk
McClure, F. D	Clerk
Speck, J. T	Clerk
Mallon, J. G	Clerk
Foster, J. W	Clerk
Beamish, Duretta	Clerk
Shaw, A. E	Clerk
Mallon, Francis	Messenger
Dales, M. G	Clerk
Crehan, W. H	Clerk
Affleck, Nora M	Stenographer
Grimbley, Harry O	Assistant in Apiculture
Leith, William	Clerk
Glide, May B	Clerk
Paterson, F. C	Agricultural Representative
Nicholson, Lila M	Clerk Stenographer

NEW TEMPORARY APPOINTMENTS

ENDING OCTOBER 31, 1920

AND PRESIDENT OF THE COUNCIL.

Branch or Office.	Salary.	Date of Certificate.	Period.
Civil Service Commissioner	$16 00 per week	Jan. 16	3 months
Civil Service Commissioner	16 00 per week	Feb. 9	1 month.
Prime Minister	18 00 per week	June 4	3 months
Civil Service Commissioner	18 00 per week	July 13	1 month.

AGRICULTURE.

Branch or Office.	Salary.	Date of Certificate.	Period.
	$100 00 per month	Nov. 10	3 months.
Institutes	16 00 per week	Nov. 28	3 months
Ontario Agricultural College	100 00 per month	Dec. 1	6 months.
Statistics and Publications	3 00 per diem	Feb. 6	2 months.
Live Stock	10 50 per week	Mar. 16	2 months
Dairy Branch	125 00 per month	Mar. 25	8 months
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 25	8 months.
Dairy Branch	125 00 per month	Mar. 30	8 months.
Dairy Branch	125 00 per month	Mar. 30	8 months.
Live Stock	16 00 per week	Apr. 12	3 months.
Live Stock	15 00 per week	May 6	3 months.
Institutes	2 00 per diem	June 12	1 month.
Fruit	16 00 per week	June 18	1 month.
Statistics and Publications	3 50 per diem	July 9	3 months.
Statistics and Publications	3 50 per diem	July 9	3 months.
Statistics and Publications	3 50 per diem	July 9	3 months.
Statistics and Publications	3 00 per diem	July 9	3 months.
Statistics and Publications	3 00 per diem	July 12	3 months.
Statistics and Publications	2 25 per diem	July 12	3 months.
Statistics and Publications	3 00 per diem	July 13	2 months.
	10 50 per week	July 14	2 months.
Statistics and Publications	3 00 per diem	July 16	3 months
Statistics and Publications	3 00 per diem	July 16	3 months.
Agricultural Societies	15 00 per week	July 19	2 months.
Ontario Agricultural College	100 00 per month	Aug 4.	6 months.
Statistics and Publications	3 00 per diem	Aug 6	2 months.
Statistics and Publications	3 00 per diem	Aug 6	1 month.
	166 $66\frac{2}{3}$ per month	Sept. 15	6 months.
Institutes	18 00 per week	Sept. 27	3 months.

DEPARTMENT OF THE

Name.	Position.
McCaul, Wilfred John	Clerk
Edmunds, Beryl W	Stenographer
Massey, Cecilia L	Stenographer
Ross, Anne Isabel	Stenographer
Gordon, Frank William	Clerk
Winchester, Arthur S	Junior Law Clerk
Lobb, Harriet I	Stenographer
Edgeworth, Hazel C	Stenographer
Brennan, F. P	Junior Law Clerk
Jones, Harold S	Chief Clerk
Thurgarland, Myrtle E	Stenographer
Maginnis, Percy	Clerk
Greenstreet, Allayne	Stenographer
Manning, Jessie McI	Clerk and Typist
Burns, Madeline	Stenographer
Cameron, John	Junior Messenger
Myers, Richard	Clerk
Macabe, Kathleen M	Filing Clerk
Porter, Arthur S	Investigator for Eastern Ontario
Herington, Alfred E	Loan and Trust Company Auditor
Smelt, William John	Clerk and Stenographer
Martin, James McK	Clerk
Speck, J. T	Clerk
Bowman, Tom E	Clerk
Smale, Philip J	Clerk
Riley, William	Clerk Typist
Palmer, Arthur H	Constable
Ball, Gilbert S	Constable
Bailey, William F	Constable
Brady, James	Constable
Cox, Richard	Constable
Cowherd, H. F	Constable
Trebell, Russell	Constable
McGovern, William	Constable
Cox, William P	Constable
Ward, A. H	Constable
Paterson, Catherine	Junior Clerk Typist
Poole, Alma F	Junior Clerk Stenographer
Springstein, Stanley	Law Student
Cannon, Dorothy	Junior Clerk Typist

DEPARTMENT OF

Howes, Charles E	Assistant Engineer
Brill, Louise F. C	Clerk Stenographer
Fraser, Marjorie F	Clerk
Uffen, J. F	Clerk
Lunn, Helena	School Nurse
Fawcett, J. T	Clerk
Laird, Robert C	Clerk
Sievert, Francis A	Messenger
Moran, Muriel	Clerk
Millar, K. Maude	Clerk
Marshall, Mary	Clerk
Willmot, Constance V	Clerk
Hunt, Ina M	Clerk
Moran, Gladys	Clerk
Callighen, Francis C. W	Messenger
Anglin, A. A	Clerk
Carlisle, Andrew M	Clerk
Airth, Ethel	Clerk
White, T. Frank	Clerk
Rolling, Walter	Clerk
Longfield, Ethel	Clerk
McDonald, John G	Clerk
Sweezey, Edna	Clerk

ATTORNEY GENERAL

Branch or Office.	Salary.	Date of Certificate.	Period.
Audit of Justice Accounts	$21 00 per week	Nov. 15	3 months.
Minister's Office	18 00 per week	Nov. 19	3 months.
Law Clerk of Public Bills	15 00 per week	Nov. 22	1 month.
	15 00 per week	Jan. 3	1 month.
Audit of Justice Accounts	3 50 per diem	Jan. 22	1 month.
	125 00 per month	Jan. 23	3 months.
	17 00 per week	Jan. 26	1 month.
Audit of Justice Accounts	16 00 per week	Jan. 28	3 months.
	125 00 per month	Feb. 3	3 months.
The Public Trustee	150 00 per month	Mar. 2	6 months.
The Public Trustee	900 00 per annum	Mar. 2	6 months.
The Public Trustee	700 00 per annum	Mar. 2	6 months.
	18 00 per week	Mar. 18	1 month.
Insurance	16 00 per week	Mar. 22	1 month.
Law Clerk of Public Bills	20 00 per week	Mar. 29	1 month.
Osgoode Hall	10 50 per week	Apr. 1	3 months.
Land Titles	21 00 per week	Apr. 1	3 months.
Insurance	16 00 per week	Apr. 14	3 months.
The Public Trustee	1,600 00 per annum	Apr. 28	3 months.
Insurance	200 00 per month	Apr. 30	6 months.
Insurance	25 00 per week	May 15	3 months.
Land Titles	21 00 per week	June 9	3 months.
Land Titles	21 00 per week	June 9	3 months.
Land Titles	21 00 per week	June 9	3 months.
Land Titles	3 50 per diem	July 6	3 months.
Insurance	3 00 per diem	Aug. 3	1 month..
Ontario Provincial Police Force	125 00 per month	Aug. 3	3 months.
Ontario Provincial Police Force	125 00 per month	Aug. 3	3 months.
Ontario Provincial Police Force	125 00 per month	Aug. 3	3 months.
Ontario Provincial Police Force	125 00 per month	Aug. 3	3 months.
Ontario Provincial Police Force	125 00 per month	Aug. 3	3 months.
Ontario Provincial Police Force	125 00 per month	Aug. 3	3 months.
Ontario Provincial Police Force	125 00 per month	Aug. 3	3 months.
Ontario Provincial Police Force	125 00 per month	Aug. 3	3 months.
Ontario Provincial Police Force	125 00 per month	Aug. 3	3 months.
Ontario Provincial Police Force	125 00 per month	Aug. 3	3 months.
Insurance	16 00 per week	Sept. 27	1 month..
Insurance	15 00 per week	Oct. 21	1 month..
	16 00 per week	Oct. 25	2 months.
Insurance	15 00 per week	Oct. 26	1 month.

EDUCATION.

Branch or Office.	Salary.	Date of Certificate.	Period.
Ontario School for the Blind, Brantford	$75 00 per month	Nov. 28	4 months.
Assistant Inspector of Public and Separate Schools, North Bay	75 00 per month	Jan. 3	3 months.
	3 40 per diem	Jan. 24	6 months.
Accountant's Branch	2,000 00 per annum	Apr. 20	3 months.
	4 00 per diem	Apr. 28	3 months.
Departmental Examinations	4 50 per diem	May 10	
Departmental Examinations	3 50 per diem	May 10	
Departmental Examinations	2 50 per diem	May 11	
Departmental Examinations	3 50 per diem	May 11	
Departmental Examinations	3 50 per diem	May 11	
Departmental Examinations	3 50 per diem	May 11	
Departmental Examinations	4 00 per diem	May 11	
Departmental Examinations	4 00 per diem	May 11	
Departmental Examinations	3 50 per diem	May 11	
Departmental Examinations	2 50 per diem	May 11	
Departmental Examinations	3 00 per diem	May 11	
Departmental Examinations	6 00 per diem	May 12	
Departmental Examinations	5 00 per diem	May 12	
Departmental Examinations	8 00 per diem	May 12	
Departmental Examinations	7 00 per diem	May 12	
Departmental Examinations	5 00 per diem	May 12	
Departmental Examinations	7 00 per diem	May 12	
Departmental Examinations	4 00 per diem	May 12	

Name.	Position.
Trewin, Robert F.	Clerk
Lamon, Thomas A.	Clerk
Pearson, Irene M.	Stenographer
Ryan, Kathleen P.	Stenographer
Lapensee, Joseph	Inspector of English-French Schools in Eastern Ontario
Richer, Miss F.	Assistant Teacher
Fisher, A. J.	Messenger
Chalufour, Miss. A	Clerk
Wilson, William	Clerk
Defoe, Donald	Clerk
Bryce, G. M.	Clerk
Edmison, J. A.	Clerk
Doughty, F.E.	Clerk
Stokes, M. L.	Clerk
Bruce, Hilda	Clerk
Howse, Lila R.	Clerk
Argue, Mildred L.	Clerk
Scott, Edith H.	Clerk
McLaren, M. Ruth	Clerk
Trewin, Annie K.	Clerk
Guscott, Reta M.	Clerk
Fennell, Mabel E.	Clerk
Reburn, Violet	Clerk
Dobson, Muriel M.	Clerk
Laughlin, N. J.	Clerk
Guenther, John F.	Clerk
Ballantyne, P. M.	Clerk
Hance, I. J.	Clerk
MacDonald, Neil	Clerk
Brokenshire, M. C.	Clerk
Keeling, W. L.	Clerk
Burns, A, G.	Clerk
Kilgour, A. J.	Clerk
Williams, C. V.	Clerk
Haddow, G. C.	Clerk
Sneddon, H. R.	Clerk
Truax, A. J.	Clerk
Pentland, A. E. C.	Clerk
Bicknell, F. R.	Clerk
Langford, H. D.	Clerk
Irwin, J. E.	Clerk
Bell, J. W.	Clerk
Baker, L. L.	Clerk
Moon, H. R.	Clerk
Grigg, V. S.	Clerk
Sutherland, H. R.	Clerk
Richer, Fernande	Clerk
Dexter, G. F.	Messenger
Junkin, F. L.	Clerk
James, Elda M.	Clerk
Nodwell, G. R.	Clerk
McCabe, W. J.	Clerk
McGrath, Henry	Clerk
McCrimmon, B. D.	Clerk
Anderson, F. A. D.	Clerk
Evans, Edward	Clerk
Parry G. O.	Clerk
Ryckman, G. V.	Clerk
Allen, S. J.	Clerk
Campbell, A. M.	Clerk
Nicholson, R. W.	Clerk
Scott, F. M.	Clerk
Sheridan J. A.	Clerk
Drummond Harry	Clerk
Bowman, Willa	Clerk and Typist
Klaehn, I. Gertrude	Clerk

EDUCATION—*Continued*

Branch or Office.	Salary.	Date of Certificate.	Period.
Departmental Examinations	$6 00 per diem	May 12	
Departmental Examinations	7 00 per diem	May 12	
	16 00 per week	May 13	3 months.
Departmental Examinations	3 00 per diem	May 17	
	10 00 per diem	May 19	
English-French Model School, Sturgeon Falls	7 00 per diem	May 19	
Departmental Examinations	2 25 per diem	May 20	
Departmental Examinations	3 50 per diem	May 21	
Departmental Examinations	4 50 per diem	May 25	
Departmental Examinations	3 00 per diem	May 31	
Departmental Examinations	3 00 per diem	May 31	
Departmental Examinations	3 00 per diem	May 31	
Departmental Examinations	3 00 per diem	May 31	
Departmental Examinations	3 50 per diem	June 1	
Departmental Examinations	3 50 per diem	June 1	
Departmental Examinations	3 50 per diem	June 1	
Departmental Examinations	3 50 per diem	June 1	
Departmental Examinations	3 50 per diem	June 1	
Departmental Examinations	3 50 per diem	June 1	
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Departmental Examinations	3 50 per diem	June 1	
Departmental Examinations	3 50 per diem	June 1	
Departmental Examinations	3 50 per diem	June 1	
Departmental Examinations	4 50 per diem	June 2	
Departmental Examinations	4 50 per diem	June 2	
Departmental Examinations	4 50 per diem	June 2	
Departmental Examinations	4 50 per diem	June 2	
Departmental Examinations	4 50 per diem	June 2	
Departmental Examinations	5 00 per diem	June 2	
Departmental Examinations	5 00 per diem	June 2	
Departmental Examinations	3 50 per diem	June 2	
Departmental Examinations	4 50 per diem	June 2	
Departmental Examinations	4 50 per diem	June 2	
Departmental Examinations	4 50 per diem	June 2	
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Departmental Examinations	4 50 per diem	June 2	
Departmental Examinations	4 50 per diem	June 2	
Departmental Examinations	3 50 per diem	June 2	
Departmental Examinations	2 25 per diem	June 2	
Departmental Examinations	4 50 per diem	June 2	
Departmental Examinations	3 50 per diem	June 2	
Departmental Examinations	4 50 per diem	June 4	
Departmental Examinations	3 00 per diem	June 4	
Departmental Examinations	3 50 per diem	June 4	
Departmental Examinations	3 00 per diem	June 9	
Departmental Examinations	4 50 per diem	June 14	
Departmental Examinations	4 50 per diem	June 18	
Accountant's Branch	3 50 per diem	June 21	2 months
Departmental Examinations	4 50 per diem	June 21	
Departmental Examinations	4 50 per diem	June 21	
Departmental Examinations	4 50 per diem	June 21	
Departmental Examinations	4 50 per diem	June 21	
Departmental Examinations	4 50 per diem	June 21	
Departmental Examinations	3 00 per diem	June 22	
Business Branch	3 50 per diem	July 2	
Inspector of Elementary Agriculture	3 50 per diem	July 5	2 months.
Business	2 50 per diem	July 6	1 month.

DEPARTMENT OF

Name.	Position.
Klaehn, Hinda A.	Clerk
Lee, C. Gerald	Messenger
Drummond, Harold	Clerk
Sinclair, Mrs. M. G.	Departmental Teacher

DEPARTMENT OF

Name.	Position.
Boyd, Gladys C.	Stenographer
Childs, Margaret	Stenographer
Stock, Charles H.	Clerk

DEPARTMENT

Name.	Position.
Morrison, John George	Assistant at Laboratory
MacPherson, Elsinore	Assistant Investigator
Smith, Joseph	Assistant at Laboratory
Johnson, Marjorie P.	Stenographer
Beck, Nona	Stenographer
Davids, Rupert	Stenographer
Ramsden, Cecil H.	Clerk
Jacobs, George	Clerk
Smith, William John	Superintendent
Speck, John T.	Assistant Investigator
Osborne, Violet I.	Stenographer
Davis, Mabel	Clerk
Thomson, Jean M.	Stenographer
Guyatt, Dr. B. L.	Assistant to Chief Officer of Health
Pratt, Frederick G.	Clerk
Coghill, Dorothy	Typist
Stroud, William Allan	Superintendent
Wallace, Samuel A.	Superintendent
Lane, Olive	Stenographer
Meredith, Vivian M.	Clerk
King, Charles W.	Clerk
Saville, Harold	Clerk
Williams, Lillian J.	Switchboard Operator
Waizman, Mary T.	Typist
Rice, Leonard A.	Office Appliance Operator
Lucas, Edith H.	Stenographer
West, J. Pender	Factory Inspector and Examiner of Reports and Designs
Scott, E. Fern	Attendant, Tuberculosis Exhibit
Fallows, Sidney N.	Clerk
Martin, Mary	Clerk
Ford, Charles S.	Superintendent
White, Lillian M.	Stenographer
Brown, James M.	Assistant to Board
Manning, Jessie M.	Typist
Fields, Mrs. M.	Assistant
Crysler, Roy A.	Assistant Engineer
Johnston, E. Wilmot	Assistant Engineer
Burn, G. A. H.	Assistant Engineer
Ryan, T. J. L.	Assistant Engineer
Ure, Douglas J.	Assistant Engineer

EDUCATION—*Continued.*

Branch or Office.	Salary.	Date of Certificate.	Period.
Business	$2 50 per diem	July 6	1 month.
Departmental Examinations	2 50 per diem	July 6	
Accountant's Branch	4 50 per diem	Aug. 19	1 month.
Normal School, Hamilton	250 00 per month	Sept. 20	
GAME AND FISHERIES.			
	$15 00 per week	Jan. 17	3 months.
	15 00 per week	Mar. 15	1 month.
Sales Branch	1,600 00 per annum	June 4	3 months.
OF LABOUR.			
Provincial Board of Health	$5 00 per diem	Nov. 20	3 months.
	100 00 per month	Dec. 5	3 months.
Provincial Board of Health	3 25 per diem	Dec. 5	3 months.
Stationary and Hoisting Engineers	16 50 per week	Dec. 8	3 months.
Stationary and Hoisting Engineers	16 00 per week	Dec. 8	3 months.
	1,200 00 per annum	Dec. 16	6 months.
Ontario Government Public Employment Bureau, Toronto	1,300 00 per annum	Dec. 19	3 months.
Ontario Government Public Employment Bureau, Toronto	1,300 00 per annum	Dec. 23	3 months.
Ontario Government Public Employment Bureau, Hamilton	125 00 per month	Dec. 23	6 months.
	4 00 per diem	Dec. 24	1 month.
	14 00 per week	Jan. 3	3 months.
Ontario Government Public Employment Bureau, Toronto	16 00 per week	Jan. 3	3 months.
Stationary and Hoisting Engineers	13 50 per week	Jan. 6	2 months.
Provincial Board of Health	10 00 per diem	Jan. 19	3 months.
Ontario Government Public Employment Bureau, Toronto	125 00 per month	Jan. 20	3 months.
Stationary and Hoisting Engineers	15 00 per week	Feb. 4	3 months.
Ontario Government Public Employment Bureau, Kingston	11,500 00 per annum	Feb. 19	6 months.
Ontario Government Public Employment Bureau, St. Catharines	1,500 00 per annum	Feb. 19	6 months.
Factory Inspection	15 00 per week	Feb. 21	1 month
Stationary and Hoisting Engineers	15 00 per week	Feb. 21	3 months.
Ontario Government Public Employment Bureau, Toronto	100 00 per month	Mar. 4	3 months.
Ontario Government Public Employment Bureau, Hamilton	100 00 per month	Mar. 10	3 months.
Ontario Government Public Employment Bureau, Toronto	16 00 per week	Mar. 10	3 months.
	16 00 per week	Mar. 22	1 month.
Provincial Board of Health	14 00 per week	Mar. 23	3 months.
Stationary and Hoisting Engineers	16 00 per week	Mar. 24	1 month.
Factory Inspection	2,200 00 per annum	Mar. 30	3 months.
Provincial Board of Health	3 50 per diem	Apr. 6	3 months.
Ontario Government Public Employment Bureau, Toronto	100 00 per month	Apr. 8	3 months.
Ontario Government Public Employment Bureau, Toronto	16 00 per week	Apr. 13	3 months.
Ontario Government Public Employment Bureau, Ottawa	1,600 00 per annum	Apr. 13	6 months.
Ontario Government Public Employment Bureau, St. Catharines	13 00 per week	Apr. 15	3 months.
Stationary and Hoisting Engineers	2,200 00 per annum	Apr. 20	6 months.
Stationary and Hoisting Engineers	16 00 per week	Apr. 20	1 month.
Provincial Board of Health	2 00 per diem	Apr. 20	6 months.
Provincial Board of Health	4 00 per diem	Apr. 28	3 months.
Provincial Board of Health	4 00 per diem	Apr. 28	3 months.
Provincial Board of Health	4 00 per diem	Apr. 28	3 months.
Provincial Board of Health	4 00 per diem	Apr. 28	3 months.
Provincial Board of Health	4 00 per diem	Apr. 28	3 months.

DEPARTMENT OF

Name.	Position.
Butterworth, Edmund	Assistant Engineer
Brown, Harold D.	Assistant Biologist
McAlpine, Miss E. M.	Stenographer
Fraser, A. D. R.	Assistant Chemist, Experimental Station
Lucas, C. H. W.	Assistant Chemist and Bacteriologist, Experimental Station
Clark, R. L.	Superintendent
Green, L. F.	Superintendent
Phillips, Miss M. L.	Switchboard Operator
Race, W. H.	Superintendent
Lott, W. H.	Superintendent
Wilcox, C. J.	Superintendent
Horne, H. R.	Employment Scout
Stewart, C. R.	Superintendent
Brock, T. W.	Employment Scout
Ball, Oliver B.	Assistant Engineer, Experimental Station
Lamond, A. E.	Clerk
Osborne, Katherine E.	Attendant with Tuberculosis Exhibit
Charlton, H. P.	Superintendent
Tew, Daisy	Clerk
Garner, H. C.	Superintendent
Wood, A. C.	Clerk
Turner, Frank	Clerk
Reddin, Mary A.	Stenographer
Smith, Gladys M.	Stenographer
Vickers, John	Janitor
Wray, Harry	Clerk
Armstrong, Muriel	Stenographer, Division of Industrial Hygiene
Kennedy, Catherine M.	Stenographer
McKechnie, E. Vivian	Stenographer
Fitzgerald, W. J.	Clerk and Stenographer
Lang, Jean K.	Stenographer
LeDrew, Maude	Typist
Rogers, Elizabeth W.	Investigator
Farncomb, Dorothy	Investigator
Kelly, Frank	Operator of Moving Picture Machine with Public Health Exhibit
Storms, Edna M.	Investigator
Bentley, Harry	Clerk
Hare, Marion A. H.	Clerk Stenographer
Macdonald, Frances W. G.	Special Investigator
King, Elizabeth	Investigator
Stephenson, William	Investigator
Patterson, Alexander	Messenger
O'Connor, Nellie A.	Investigator
Ruddick, William R.	Clerk
Bapty, Helen	Investigator
Lawrence, M. Anne E.	Investigator

LABOUR—*Continued.*

Branch or Office.	Salary.	Date of Certificate.	Period.
Provincial Board of Health	$3 50 per diem	Apr. 29	3 months.
Provincial Board of Health	4 50 per diem	Apr. 30	3 months.
Ontario Government Public Employment Bureau, Toronto	15 00 per week	May 14	3 months.
Provincial Board of Health	4 00 per diem	May 15	3 months.
Provincial Board of Health	4 50 per diem	May 15	3 months.
Ontario Government Public Employment Bureau, Orillia	1,400 00 per annum	May 15	6 months.
Ontario Government Public Employment Bureau, Belleville	1,400 00 per annum	May 15	6 months.
Ontario Government Public Employment Bureau, Toronto	16 00 per week	May 17	3 months.
Ontario Government Public Employment Bureau, Niagara Falls	1,400 00 per annum	May 17	6 months.
Ontario Government Public Employment Bureau, Sarnia	1,400 00 per annum	May 17	3 months.
Ontario Government Public Employment Bureau, Oshawa	1,400 00 per annum	May 17	3 months.
Ontario Government Public Employment Bureau, Toronto	1,600 per annum	May 18	6 months.
Ontario Government Public Employment Bureau, Pembroke	1,400 00 per annum	May 20	6 months.
Ontario Government Public Employment Bureau, Toronto	1,600 00 per annum	May 20	6 months.
Provincial Board of Health	4 00 per diem	May 20	3 months.
Ontario Government Public Employment Bureau, Timmins	1,300 00 per annum	May 20	3 months.
Provincial Board of Health	3 75 per diem	May 21	3 months.
Ontario Government Public Employment Bureau, Cobalt	1,500 00 per annum	May 25	3 months.
Factory Inspection	16 00 per week	May 25	3 months.
Ontario Government Public Employment Bureau, Timmins	1,500 00 per annum	May 26	6 months.
Ontario Government Public Employment Bureau, Port Arthur	1,300 00 per annum	May 27	3 months.
Ontario Government Public Employment Bureau, Ottawa	1,400 00 per annum	July 9	3 months.
Boiler Inspection	18 00 per week	July 12	1 month.
Provincial Board of Health	18 00 per week	July 19	3 months.
Ontario Government Public Employment Bureau, Toronto	100 00 per month	July 29	3 months.
Ontario Government Public Employment Bureau, London	1,400 00 per annum	July 31	3 months.
Provincial Board of Health	80 00 per month	Aug. 6	3 months.
Provincial Board of Health	17 00 per week	Aug. 12	3 months.
Mothers' Allowances Commission	25 00 per week	Aug. 19	3 months.
Ontario Government Public Employment Bureau, Windsor	100 00 per month	Aug. 19	3 months.
Mothers' Allowances Commission	25 00 per week	Aug. 19	3 months.
Mothers' Allowances Commission	16 00 per week	Sept. 2	3 months.
Mothers' Allowances Commission	125 00 per month	Sept. 2	3 months.
Mothers' Allowances Commission	125 00 per month	Sept. 2	3 months.
Provincial Board of Health	25 00 per week	Sept. 2	1 month.
Mothers' Allowances Commission	125 00 per month	Sept. 4	3 months.
Mothers' Allowances Commission	125 00 per month	Sept. 7	3 months.
Provincial Board of Health	18 00 per week	Sept. 10	3 months.
Mothers' Allowances Commission	125 00 per month	Sept. 16	3 months.
Mothers' Allowances Commission	125 00 per month	Sept. 16	3 months.
Mothers' Allowances Commission	125 00 per month	Oct. 7	3 months.
Mothers' Allowances Commission	20 00 per week	Oct. 8	3 months.
Mothers' Allowances Commission	125 00 per month	Oct. 14	3 months.
Ontario Government Public Employment Bureau, Toronto	25 00 per week	Oct. 14	3 months.
Mothers' Allowanes aCommission	125 00 per month	Oct. 14	3 months.
Mothers' Allocwnces Commission	125 00 per month	Oct. 20	3 months.

DEPARTMENT OF

Name.	Position.
Fraser, Alice M.	Investigator
Ward, Fred	Clerk
Clewlo, Minnie	Clerk Stenographer
Strange, Jessie	Investigator
McMullen, Edith H.	Investigator
VanDine, Mrs. M. A.	Investigator
Liddle, Muriel	Telephone Operator
Smith, Rev. A. E.	Investigator

DEPARTMENT OF

Hastings, Mrs. Dorothy M.	Stenographer
Beley, Birdie	Stenographer
Harrison, Eva	Stenographer
Bassford, Vera M.	Stenographer
White, Dr. J. H.	In connection with Fire Ranging
Faull, Dr. J. H.	In connection with Plant Pathology
Duval, Charles D.	Assistant General Superintendent of Fire Ranging
Johnston, R. M.	Forest Assistant
Danby, Gordon D.	Office Boy

DEPARTMENT

Farrington, James	Private Secretary
Stewart, Robert	Office Boy
Whiteway, Beatrice M.	Stenographer
Watson, Charles	Draftsman
Boys, Edith R.	Stenographer
Harrington, H. A.	Fuel Controller
Field, Doris J.	Stenographer
Stuart, William O.	Office Boy
Bell, Mrs. E. C.	Clerk
Johnstone, J. E. A.	Clerk
Eves, Roland	Assistant to Departmental Draftsman, North Bay
McLean, M. O. L.	Inspector of Sand and Gravel Dredging
Douglas, James	Assistant to Departmental Draftsman, North Bay
Fuller, Thomas W.	Guard in Connection with Exhibit at Exhibition
Burn, B. D.	Natural Gas Inspector
Markle, Olive B.	Junior Clerk Stenographer
Shute, Frank	Inspector of Sand and Gravel Dredging

DEPARTMENT OF THE

Crothers, Jean P.	Stenographer
Morrison, John George	Assistant at Laboratory
McBain, Rachael	Clerk and Stenographer
Bradley, Irene H.	Stenographer
Bray, Irene H.	Clerk Stenographer
McCallum, Earl	Clerk
Rose, Leah	Clerk
Dickson, John W.	License Inspector
Keating, Marguerite	Clerk and Stenographer
Saunders, Amy	Stenographer
Walter, Philip	License Inspector
McFadden, William	Engineer
McCrea, Nora K.	Clerk and Stenographer
Kynnersley, Albert E.	Clerk
Morgan, John P.	Provincial Officer
Boddy, James W.	Painter

LABOUR.—*Continued.*

Branch or Office.	Salary.	Date of Certificate.	Period.
Mothers' Allowances Commission	$100 00 per month	Oct. 20	2 months.
Ontario Government Public Employment Bureau, Kingston	75 00 per month	Oct. 20	3 months.
Mothers' Allowances Commission	18 75 per week	Oct. 26	3 months.
Mothers' Allowances Commission	125 00 per month	Oct. 26	3 months.
Mothers' Allowances Commission	125 00 per month	Oct. 26	3 months.
Mothers' Allowances Commission	100 00 per month	Oct. 27	2 months.
Ontario Government Public Employment Bureau, Toronto	850 00 per annum	Oct. 27	3 months.
Mothers' Allowances Commission	100 00 per month	Oct. 30	2 months.

LANDS AND FORESTS.

Branch or Office.	Salary.	Date of Certificate.	Period.
Woods and Forests	$16 00 per week	Apr. 30	1 month.
Minister's Office	18 00 per week	May 11	6 months.
Minister's Office	16 00 per week	May 11	6 months.
Forestry	15 00 per week	June 1	3 months.
	250 00 per month	June 11	3 months.
	250 00 per month	June 11	3 months.
	2,500 00 per annum	June 29	6 months.
Forestry	150 00 per month	July 26	3 months.
	2 00 per diem	Aug. 16	1 month.

OF MINES.

Branch or Office.	Salary.	Date of Certificate.	Period.
	$1,600 00 per annum	Jan. 15	3 months.
Provincial Assay	11 00 per week	Jan. 15	3 months
	16 00 per week	Jan. 20	6 months.
Mining Recorder's	1,800 00 per annum	Feb. 9	6 months.
Mining Commissioner	18 00 per week	Feb. 21	3 months.
	500 00 per month	Mar. 26	*pro tem.*
	15 00 per week	Mar. 30	3 months.
	10 50 per week	May 7	3 months.
	16 00 per week	May 7	3 months.
	30 00 per week	June 11	2 months.
	100 00 per month	July 31	2 months.
	28 00 per week	Aug. 9	3 months.
	100 00 per month	Aug. 24	2 months.
	3 50 per diem	Aug. 30	2 weeks.
	125 00 per month	Sept. 13	6 months.
	16 00 per week	Sept. 15	1 month.
	28 00 per week	Sept. 25	2 months.

PROVINCIAL SECRETARY.

Branch or Office.	Salary.	Date of Certificate.	Period.
Neglected Children	$16 00 per week	Nov. 20	3 months.
Provincial Board of Health	5 00 per diem	Nov. 20	3 months.
Assistant Provincial Secretary	18 00 per week	Dec. 11	3 months.
Assiistant Provincial Secretary	14 00 per week	Jan. 15	3 months.
Inspection Public Institutions	15 00 per week	Jan. 26	3 months.
Assistant Provincial Secretary	3 50 per diem	Feb. 3	3 months.
Assistant Provincial Secretary	16 00 per week	Feb. 9	2 months.
Board of License Commissioners for Ontario	1,500 00 per annum	Feb. 27	6 months.
Board of License Commissioners for Ontario	15 00 per week	Feb. 28	3 months.
Inspection Public Institutions	16 00 per week	Mar. 1	3 months.
Board of License Commissioners for Ontario	1500 00 per annum	Mar. 9	6 months.
Ontario Hospital, London	1,050 00 per annum	Mar. 17	3 months.
Board of License Commissioners for Ontario	75 00 per month	Mar. 19	3 months.
Assistant Provincial Secretary	3 50 per diem	Mar. 24	3 months.
Board of License Commissioners for Ontario	120 00 per month	Apr. 19	1 month.
Ontario Hospital, Whitby	1,050 00 per annum	Apr. 20	6 months.

DEPARTMENT OF THE

Name.	Position.
DeHaitre, Arthur	Provincial Officer
Stick, Frank	Provincial Officer
Boyd, Effie B.	Stenographer
Finney, W. J.	Clerk and Stenographer
Maynard, Miss L. C.	Stenographer
Simpson, Frank	Clerk and Messenger
Edmunds, Irene	Clerk and Stenographer
Newman, Frances M.	Stenographer
Mayor, Wilbur	Messenger
Moore, J. Howard	Multigraph Operator
Stewart, Christine I.	Stenographer
Tipton, Richard	Provincial Officer
Sawdon, George	Provincial Officer
McCready, William	Provincial Officer
Spracklin, Rev. J. O. L.	Provincial Officer
Mulhall, John F.	Provincial Officer
Zinkann, Ephraim	License Inspector
Warren, William	Provincial Officer
Porter, C. J.	License Inspector
Barnes, J. H.	Provincial Officer
Williams, C. J.	Provincial Officer
Adie, John	Provincial Officer
East, H. H.	Provincial Officer
Shepherd, Frank	Provincial Officer
Rix, Arthur	Provincial Officer
McPhaden, M.	Provincial Officer
Mulholland, R. J.	Provincial Officer
Stratton, T. Y.	Provincial Officer
Crampton, H. G.	Provincial Officer
Howie, James R.	Provincial Officer
Silvester, David	Provincial Officer
Down, George	Provincial Officer
Gagne, John	Provincial Officer
Arsenault, A.	Provincial Officer
Coorian, Alexander	Provincial Officer
Cross, Herbert H.	Provincial Officer
Side, Matthew	License Inspector

PROVINCIAL SECRETARY—*Continued.*

Branch or Office.	Salary.	Date of Certificate.	Period.
Board of License Commissioners for Ontario	$125 00 per month	Apr. 20	3 months.
Board of License Commissioners for Ontario	125 00 per month	Apr. 20	3 months.
Assistant Provincial Secretary	16 00 per week	Apr. 30	3 months.
Assistant Provincial Secretary	18 00 per week	May 6	3 months.
Board of License Commissioners for Ontario	16 00 per week	May 17	3 months.
Board of License Commissioners for Ontario	12 00 per week	May 25	3 months.
Assistant Provincial Secretary	18 00 per week	June 7	3 months.
Inspection Public Institutions	18 00 per week	June 14	3 months.
Assistant Provincial Secretary	10 00 per week	June 16	3 months.
Inspection Public Institutions	15 00 per week	July 5	3 months.
Inspection Public Institutions	18 00 per week	July 14	3 months.
Board of License Commissioners for Ontario	150 00 per month	July 23	3 months.
Board of License Commissioners for Ontario	150 00 per month	July 23	3 months.
Board of License Commissioners for Ontario	125 00 per month	July 23	3 months.
Board of License Commissioners for Ontario	175 00 per month	July 27	3 months.
Board of License Commissioners for Ontario	150 00 per month	July 27	3 months.
Board of License Commissioners for Ontario	125 00 per month	July 30	6 months.
Board of License Commissioners for Ontario	125 00 per month	July 30	3 months.
Board of License Commissioners for Ontario	125 00 per month	July 31	3 months.
Board of License Commissioners for Ontario	125 00 per month	Aug. 4	3 months.
Board of License Commissioners for Ontario	125 00 per month	Aug. 4	3 months.
Board of License Commissioners for Ontario	125 00 per month	Aug. 4	3 months.
Board of License Commissioners for Ontario	125 00 per month	Aug. 4	3 months.
Board of License Commissioners for Ontario	125 00 per month	Aug. 4	3 months.
Board of License Commissioners for Ontario	125 00 per month	Aug. 4	3 months.
Board of License Commissioners for Ontario	125 00 per month	Aug. 4	3 months.
Board of License Commissioners for Ontario	125 00 per month	Aug. 4	3 months.
Board of License Commissioners for Ontario	125 00 per month	Aug. 4	3 months.
Board of License Commissioners for Ontario	125 00 per month	Aug. 4	3 months.
Board of License Commissioners for Ontario	125 00 per month	Aug. 4	3 months.
Board of License Commissioners for Ontario	125 00 per month	Aug. 12	2 months.
Board of License Commissioners for Ontario	150 00 per month	Aug. 12	6 months.
Board of License Commissioners for Ontario	125 00 per month	Sept. 14	3 months.
Board of License Commissioners for Ontario	120 00 per month	Sept. 18	3 months.
Board of License Commissioners for Ontario	120 00 per month	Sept. 18	3 months.
Board of License Commissioners for Ontario	125 00 per month	Sept. 21	6 months.

DEPARTMENT OF THE

Name.	Position.
Simpson, Harry	Office Boy
Young, Donald Bruce	Office Boy
Justice, Mildred	Junior Clerk
Scott, Esther	Junior Clerk Stenographer
Lowder, George F.	Office Boy

DEPARTMENT OF

Name.	Position.
Wallace, Winnifred	Stenographer
Griffith, Florence	Stenographer
Heinonen, Jean E.	Stenographer

DEPARTMENT OF

Name.	Position.
Timpany, Christine	Stenographer
Dickson, H. R.	Clerk
Spackman, Amy E.	Typist
Blueman, Lucille	Clerk and Stenographer
Cannon, Dorothy	Typist
Abel, Dora	Stenographer
Franklin, Charles	Office Boy
Moffit, Elsie R.	Stenographer
Walden, Inez A.	Stenographer
Jacobs, Viola L.	Typist
Parker, Mrs. Winnifred G.	Typist
Garling, C. H.	Clerk
Jackson, Horace G.	Clerk
Burwash, L. T.	Assistant Highway Engineer
Anderson, William A.	Clerk
Clark, H. J.	Resident Highway Engineer
Reid, E. K.	Stenographer
Nicholls, Mrs. Helen	Clerk
Glover, Thomas S.	Draftsman
Downey, George A.	Resident Highway Engineer
Parrott, J. R.	Resident Highway Engineer
Rose, H. C.	Resident Highway Engineer
Earchman, A.	Resident Highway Engineer
Gibson, W. G.	Resident Highway Engineer
Wynne-Roberts, L. W.	Resident Highway Engineer
Noonan, W. F.	Resident Highway Engineer
Tom, J. A.	Resident Highway Engineer
Smith, R. S.	Resident Highway Engineer
Craig, H. C.	Resident Highway Engineer
Philp, D. H.	Resident Highway Engineer
Webb, W. M.	Resident Highway Engineer
Milmine, W. S.	Assistant Property Valuator
Robbins, C. A.	Resident Highway Engineer
Disney, L. V.	Assistant Property Valuator
Bridges, Raymond G.	Junior Draftsman
Woolcock, Harold	Clerk
McDonnell, Mrs. A. E.	Clerk
Markle, Olive B.	Typist
Donnelly, Basil J.	Clerk and Messenger
Arnold, William	Clerk
Woodruff, Frank	Constable
Balmer, Harold F.	Traffic Officer
Annis, Louis Wilma	Typist
Boyd, Madabelle H.	Stenographer
Wright, George W. A.	Inspecting Engineer
Toon, Edna N.	Cheque Writer
Murphy, Agnes Helene	Stenographer
Shortt, Geraldine G.	Stenographer
Brown, W. H.	Clerk
Bews, D. W.	Resident Highway Engineer
Nelson, C. H.	Resident Highway Engineer

PROVINCIAL SECRETARY—*Continued*.

Branch or Office.	Salary.	Date of Certificate.	Period.
Board of License Commissioners for Ontario	$12 00 per week	Sept. 23	3 months.
Assistant Provincial Secretary	10 50 per week	Oct. 11	3 months.
Neglected Children	15 00 per week	Oct. 11	3 months.
Registrar General	15 00 per week	Oct. 20	3 months.
Registrar General	10 50 per week	Oct. 25	3 months.

PUBLIC WORKS.

	$15 00 per week	Jan. 7	1 month.
	18 00 per week	May 12	2 months.
	18 00 per week	July 9	3 months.

PUBLIC HIGHWAYS.

	$15 00 per week	Jan. 6	3 months.
	100 00 per month	Jan. 14	3 months.
Motor Vehicles	15 00 per week	Jan. 29	3 months.
Motor Vehicles	16 00 per week	Feb. 4	3 months.
Motor Vehicles	15 00 per week	Feb. 9	3 months.
Motor Vehicles	15 00 per week	Feb. 21	3 months.
	12 00 per week	Feb. 25	3 months.
	16 00 per week	Mar. 29	3 months.
Motor Vehicles	15 00 per week	Apr. 8	3 months.
Motor Vehicles	15 00 per week	Apr. 12	3 months.
Motor Vehicles	16 00 per week	Apr. 13	3 months.
	100 00 per month	Apr. 15	3 months.
	100 00 per month	Apr. 27	3 months.
	200 00 per month	Apr. 28	6 months.
	21 00 per week	Apr. 30	3 months.
	200 00 per month	May 5	
	16 00 per week	May 8	3 months.
Motor Vehicles	16 00 per week	May 12	3 months.
	100 00 per month	May 13	3 months.
	200 00 per month	May 18	
	200 00 per month	May 18	
	200 00 per month	May 18	
	200 00 per month	May 18	
	200 00 per month	May 18	
	200 00 per month	May 18	
	175 00 per month	May 18	
	200 00 per month	May 18	
	200 00 per month	May 18	
	200 00 per month	May 18	
	200 00 per month	May 18	
	200 00 per month	May 18	
	6 00 per diem	May 19	
	200 00 per month	May 25	
	6 00 per diem	May 26	
	15 00 per week	June 11	3 months.
	100 00 per month	June 11	3 months.
	16 00 per week	June 11	3 months.
	16 00 per week	June 11	3 months.
Motor Vehicles	12 00 per week	June 12	3 months.
Motor Vehicles	21 00 per week	June 15	3 months.
Motor Vehicles	20 00 per week	June 18	5 months.
Motor Vehicles	6 00 per diem	June 18	3 months.
	15 00 per week	July 2	3 months.
	15 00 per week	July 6	3 months.
	200 00 per month	July 12	
	16 00 per week	July 12	3 months.
	16 00 per week	July 19	3 months.
	16 00 per week	July 19	3 months.
	25 00 per week	Aug. 19	3 months.
	200 00 per month	Aug. 25	
	200 00 per month	Aug. 30	

DEPARTMENT OF

Name.	Position.
Kennedy, Martin	Junior Draftsman
McCormack, William	Assistant Multigraph Operator
MacVicar, John	Assistant County Road Inspecting Engineer
Griffith, Marion L	Clerk Stenographer

DEPARTMENT OF

Barthel, Verna C.	Stenographer
Maguire, James	Messenger
Shanahan, J. J.	Fire Investigator
Burns, J. J.	Assistant Inspector, Poster Advertising
Frame, Christena E.	Stenographer
Blake, Harry M.	Film Editor
Rose, Harry	Amusements Tax Inspector
Gibbons, R. G.	Amusements Tax Inspector
McKay, William R. B.	Amusements Tax Inspector
Nieuwejaar, Otto	Researcher
Coulter, John	Clerk
Ensworth, Mrs. A. M.	Clerk and Stenographer
Mitchell, James C.	Clerk and Messenger
Vining, Charles MacL.	Amusements Tax Inspector
Nevin, W. A.	Amusements Tax Inspector
Sheridan, E. J.	Amusements Tax Inspector
Adams, Winnifred Mary	Stenographer
Malloy, Jean Gladys	Clerk Stenographer
Dawson, W. B.	Usher at Fairs
Turner, P. J.	Usher at Fairs
Howell, W. S.	Usher at Fairs
Shea, Peter D.	Junior Clerk
Danby, Edward J.	Office Boy
Frame, Georgina	Junior Clerk Stenographer
Ross, Marion E.	Clerk Stenographer
evenson, James Donald	Office Boy

AUDIT

Watherston, W. D.	Clerk

PUBLIC HIGHWAYS—*Continued.*

Branch or Office.	Salary.	Date of Certificate.	Period.
	$4 00 per diem	Sept. 1	6 months.
	12 00 per week	Sept. 1	2 months.
	200 00 per month	Sept. 1	
	18 00 per week	Oct. 4	3 months.

THE TREASURER.

	$15 00 per week	Jan. 6	3 months.
	10 00 per week	Jan. 22	3 months.
Fire Marshal	2,200 00 per annum	Jan. 24	6 months.
Inspector Theatres	1,500 00 per annum	Jan. 27	6 months.
Fire Marshal	15 00 per week	Feb. 25	6 months.
Motion Picture Bureau	1,600 00 per annum	Apr. 1	6 months.
Taxation	25 00 per week	Apr. 14	3 months.
Taxation	25 00 per week	Apr. 14	3 months.
Taxation	25 00 per week	Apr. 14	3 months.
Archives	125 00 per month	Apr. 30	6 months.
King's Printer's	3 00 per diem	June 1	1 month.
	75 00 per month	June 2	3 months.
Succession Duty	12 00 per week	June 18	2 months.
Taxation	25 00 per week	June 25	3 months.
Taxation	25 00 per week	June 25	3 months.
Taxation	25 00 per week	July 2	3 months.
Succession Duty	16 00 per week	July 20	1 month.
	18 00 per week	July 26	3 months.
Provincial Motion Picture Bureau	3 50 per diem	Aug. 27	1 month.
Provincial Motion Picture Bureau	3 50 per diem	Aug. 27	1 month.
Provincial Motion Picture Bureau	3 50 per diem	Aug. 27	1 month.
King's Printer's	18 00 per week	Sept. 8	3 months.
Succession Duty	12 00 per week	Sept. 13	3 months.
Fire Marshal	16 00 per week	Sept. 17	1 month.
Fire Marshal	20 00 per week	Sept. 23	3 months.
Director of Moving Picture Branches	10 50 per week	Sept. 28	3 months

OFFICE.

	$100 00 per month	Oct. 28	3 months.

CERTIFICATES ISSUED FOR RENEWALS

DURING THE FISCAL YEAR

DEPARTMENT OF THE PRIME MINISTER

Name.	Position.
Uttley, Vera	Clerk and Stenographer
Gregory, W. F.	Clerk
Brown, Georgia	Clerk and Stenographer
Barker, Gladys E.	Junior Clerk Stenographer
Hewer, Catherine M.	Record Clerk
Brethour, Blanche	Stenographer
Wiley, Beulah	Clerk and Stenographer
Kell, Mrs. M. M.	Clerk Stenographer
Boyd, Madabelle H.	Junior Clerk Stenographer

DEPARTMENT OF

Proctor, L. Kathleen	Stenographer
Clewes, William	Clerk and Messenger
Griffith, Emma	Stenographer
Morrison, Hugh	Clerk
Thompson, Irene	Stenographer
Sutherland, Davina	Clerk
Martin, Fred	Assistant in mailing reports
Roberts, Herbert A.	Office Boy
McGillivray, A. D.	Clerk
Young, John P.	Publicity Representative

Lowe, Alice W.	Stenographer
Harris, Maud M.	Stenographer
Farrell, John	Special Immigration Agent

DEPARTMENT OF

McCaul, Wilfred J.	Clerk
Massey, Cecilia L.	Stenographer
Houston, Jean	Clerk
Jackson, J. W.	Investigator
Gordon, Frank W.	Clerk
Winchester, Arthur S.	Junior Law Clerk
Lobb, Harriet I.	Stenographer
Edgeworth, Hazel C.	Stenographer
Wallis, George E.	Junior Clerk
Brennan, F. P.	Junior Law Clerk
Davies, W. J.	Chief Secretary, Judges' Secretarial Staff
Moberly, Mrs. E. M.	Clerk
McCallum, Earl	Clerk
Greenstreet, Allayne	Stenographer
Cameron, John	Junior Messenger
Myers, Richard	Clerk
Macabe, Kathleen M.	Filing Clerk
Parkhill, Madge	Clerk and Stenographer
Herington, Alfred E.	Loan and Trust Company Auditor
Smelt, William John	Clerk and Stenographer
Martin, James McK.	Clerk
Bowman, Tom E.	Clerk
Smale, Philip J.	Clerk
Mitchell, Joseph	Office Boy
Riley, William	Clerk Typist
Denne, William	Usher and Messenger
Paterson, Catherine	Junior Clerk Typist
Adams, Winnifred M.	Junior Clerk Stenographer

OF TEMPORARY APPOINTMENTS

ENDING OCTOBER 31, 1920

AND PRESIDENT OF THE COUNCIL.

Branch or Office.	Dates of Renewal.	Salary Under Last Certificate.
Prime Minister	Nov. 22	$16 50 per week.
Civil Service Commissioner	Jan. 14, July 9	125 00 per month.
Civil Service Commissioner	Jan. 16	75 00 per month.
Civil Service Commissioner	Apr. 12, July 9, Oct. 14	16 00 per week.
Civil Service Commissioner	Jan. 29	16 00 per week.
Civil Service Commissioner	Jan. 30, July 29	17 00 per week.
Executive Council	Jan. 30, April 29, June 29	18 00 per week.
Civil Service Commissioner	Aug. 7, Oct. 14	18 00 per week.
Prime Minister	Oct. 5	16 00 per week.

AGRICULTURE.

Co-Operation and Markets	Nov. 1, May 5	$16 00 per week.
Statistics and Publications	Nov. 12	3 00 per diem.
Institutes	Feb. 21, Aug. 25	16 00 per week.
Statistics and Publications	Dec. 16, June 18, Aug. 19	3 00 per diem.
Live Stock	Dec. 19	15 00 per week.
Institutes	Jan. 14, July 23	4 50 per diem.
Statistics and Publications	April 10	3 00 per diem.
Live Stock	May 13, Aug. 18	10 50 per week.
Colonization and Immigration	March 22	3 50 per diem.
Agent General for Ontario in the British Isles	April 14, Oct. 13	2,200 00 per annum.
Live Stock	Aug. 6	15 00 per week.
Fruit	July 17	18 00 per week.
Colonization Branch	Sept. 2	150 00 per month.

THE ATTORNEY GENERAL.

Audit of Justice Accounts	Feb. 17	$100 00 per month.
Law Clerk of Public Bills	Dec. 29	15 00 per week.
Audit of Justice Accounts	Dec. 17, Feb. 9, May 3, Sept. 8	16 00 per week.
The Public Trustee	Dec. 22	27 00 per week.
Audit of Justice Accounts	Mar. 19, May 14, Aug. 10, Oct. 20,	100 00 per month.
	May 10, June 25, July 31, Sept.17,	125 00 per month.
	Feb. 26, Apr. 27, June 2, Oct. 25	75 00 per month.
Audit of Justice Accounts	April 22, June 25, Sept. 27	16 00 per week.
Land Titles	Feb. 2, May 11,	11 00 per week.
	May 10, June 25, Oct. 1	175 00 per month.
Osgoode Hall	Feb. 11	166 66 per month.
Land Titles	Feb. 26, June 25, Sept. 30	15 00 per week.
Ontario Railway and Municipal Board	March 11, April 21	3 50 per diem.
	April 23	18 00 per week.
Osgoode Hall	July 9	10 50 per week.
Land Titles	July 12	21 00 per week.
Insurance	Sept. 3	16 00 per week.
Audit of Justice Accounts	April 28	16 00 per week.
Insurance	Oct. 25	200 00 per month.
Insurance	August 7	25 00 per week.
Land Titles	Sept. 20	21 00 per week.
Land Titles	Sept. 20	21 00 per week.
Land Titles	Sept. 29	3 50 per diem.
	July 29	12 00 per week.
Insurance	Sept. 2	3 00 per diem.
Osgoode Hall	Oct. 20	3 50 per diem.
Insurance	Oct. 25	16 00 per week.
Insurance	Oct. 26	16 00 per week.

DEPARTMENT OF

Name.	Position.
Burns, Kathleen	Clerk
Brown, Ethel I	Clerk
Kerr, Mary Ethel	Stenographer
Brown, Edith Jessie	Clerk and Stenographer
Coleman, Mrs. Helen	Clerk and Stenographer
Addy, Mildred	Clerk
Smith, May Irene	Clerk
Sheinert, Lena	Clerk
Foy, Myrtle	Clerk and Stenographer
Crighton, Dorothy	Clerk
Haughland, Mrs. Annie	Stenographer
Nesbitt, Mary C	Stenographer
Ferguson, Dorothy	Clerk
Paull, Victoria	Clerk
Sheridan, Chauncey	Clerk
Kerr, Vera O	Clerk
Brill, Louise F. C	Clerk and Stenographer
Sinclair, Dr. S. B	Representative
Boyd, Helen A	Clerk and Stenographer
Ashall, Amy E	Clerk and Stenographer
Smith, Elsie	Stenographer
Fraser, Marjorie F	Clerk
Lyons, Margaret E	Stenographer
Horsley, Vera L	Clerk
MacKenzie, Edna E	Stenographer
Brown, Anna M	Clerk
MacKenzie, Audrey	Typist
Borthwick, Hazel	Stenographer
Molesworth, Eva S	Clerk
Black, Gladys M	Stenographer
Davis, Annie E	Clerk
Thomson, Charles William	Clerk
Whitelaw, George	Clerk
Charbonneau, Laurette	Clerk
Blaisdell, Bruce	Clerk
Ardagh, Arthur	Clerk
Riddell, Benjamin	Filing Clerk
Clougher, J. P	Clerk
Walker, Frank L	Clerk
Spereman, P	Clerk
Drew, Marion K	Clerk
Creighton, Charles D	Clerk
Scott, Lillian G	Clerk
Smith, Charles J	Assistant
Dilks, Mabel E	Clerk
Arnoldi, Grace T	Clerk
Lyornl Gertrude	Clerk
Short, H Gladys	Stenographer
Ward, S. Jane	Stenographer
Dexter Ida P	Clerk
Truax, Una	Clerk
Sutton, Meda L	Clerk
Dies, Lila A	Clerk
Uffen, J. F	Clerk
Bright, Olive	Clerk
Lunn, Helena	School Nurse

DEPARTMENT OF

Lovelock, Grace	Filing Clerk
Kerr, Mabel L	Stenographer
Douse, George P	Clerk
Laishley, J. L	Special Patrol Officer
Fraser, Albert E	Special Patrol Officer
Boyd, Gladys C	Stenographer

EDUCATION.

Branch or Office.	Dates of Renewal.	Salary under Last Certificate.
	Nov. 11, Jan. 8, April 6, July 6	$15 00 per week.
	Nov. 11, Jan. 8, April 6, July 6	15 00 per week.
Inspector of Elementary Agriculture	Nov. 15, Feb. 16, Sept. 2	15 00 per week.
	Nov. 22, May 21, Aug. 20	3 00 per diem.
	Nov. 22, May 21, Aug. 20	3 00 per diem.
	Nov. 29, Mar. 12	15 00 per week.
	Dec. 19	2 25 per diem.
	Dec. 19, Mar. 19, June 17	15 00 per week.
	Dec. 19, Mar. 18, June 16	75 00 per month.
	Dec. 31, April 6, July 6	16 00 per week.
	Dec. 31, April 6, July 6	16 50 per week.
	Dec. 31, April 6, July 6	16 00 per week.
	Dec. 31, April 6, July 6	17 00 per week.
	Dec. 31, April 6	16 50 per week.
	Dec. 31, April 6, July 6	16 50 per week.
	Dec. 31, April 6, July 6	3 00 per diem.
Assistant Inspector of Public and Separate Schools, North Bay	April 1, July 6	75 00 per month.
Consolidation of Schools	Jan. 3, April 8	10 50 per diem.
Director of Professional Training	Jan. 5, April 6, July 6, Oct. 5	15 00 per week.
	Jan. 24, April 20, July 20	18 30 per week.
	Jan. 8, April 6, July 6, Oct. 5	15 00 per week.
	July 20, Oct. 26	3 40 per diem.
	Jan. 26, April 21, July 20	18 30 per week.
	Jan. 26, April 21, July 20	18 30 per week.
	Jan. 26, April 20	18 75 per week.
	Jan. 26, April 22, July 20	18 30 per week.
	Jan. 27, April 20, July 20, Oct. 26	16 00 per week.
Provincial Museum	Jan. 27, Apr. 20, July 20, Oct. 26	2 88 per diem.
	Jan. 27, April 20	2 88 per diem.
Departmental Library	Jan 27, April 20	2 88 per diem.
	Jan. 27, April 21, Oct. 26	17 80 per week
	Feb. 23, May 20, Aug. 20	27 00 per week
	Feb. 23, May 21	27 00 per week.
Minister's Office	Feb. 23, May 20, Aug. 20	15 00 per week.
	Feb. 23, May 20, Aug. 20	3 20 per diem.
	Feb. 23, June 2	3 00 per diem.
	Feb. 24, May 20, Aug. 20	27 00 per week.
	March 13, Sept. 15	20 00 per week.
	March 13	3 00 per diem.
Inspector of Public Libraries	March 13	19 00 per week.
	March 13	15 00 per week.
	March 13	100 00 per month.
	March 15, Sept. 15	15 50 per week.
Business Branch	March 20, Sept. 2	3 00 per diem.
	April 6, July 6	15 00 per week.
	April 6, July 6	16 00 per week.
Registrar's Office	April 6	19 00 per week.
	April 6, July 6	17 00 per week.
	April 6, July 6	17 00 per week.
	April 6, July 6	16 00 per week.
	April 6, July 6	16 00 per week.
	April 6, July 6	19 00 per week.
	April 6, July 6	17 00 per week.
	July 19	2,000 00 per annum.
	April 20	2 88 per diem.
	July 20	4 00 per diem.

GAME AND FISHERIES.

	Nov. 20, March 9, May 22	$16 00 per week.
	Nov. 27, April 13	16 00 per week.
	Dec. 19, June 22	27 00 per week.
	Dec. 31, July 2	90 00 per month.
	Dec. 31, July 2	125 00 per month.
	April 14, July 16	15 00 per week.

DEPARTMENT OF GAME

Name.	Position.
Cerswell, Christeen S.	Clerk
Childs, Margaret	Stenographer
McCartney, W. H.	Clerk
McCulloch, Richard	Hatchery Assistant
Bradley, Irene H.	Stenographer

DEPARTMENT

Ogilvie, Jean W.	Inspectress
Wands, George W.	Superintendent
Gibson, William E.	Clerk
Brown, Georgia	Clerk
Wightman, H. D.	Superintendent
Chamberlain, Charles	Assistant Engineer, Experimental Station
Cambridge, Henry S.	Assistant in Laboratory
MacPherson, Elsinore	Assistant Investigator
Cameron, William Hugh	Clerk
Miles, Eileen M.	Stenographer
Morrison, John George	Assistant at Laboratory
Killham, Henry G.	Assistant at Laboratory
Jewell, Edward	Assistant at Laboratory
Hollinger, Robert W.	Assistant at Laboratory
Smith, Joseph	Assistant at Laboratory
Beck, Nona	Stenographer
McGhie, Carrie I.	Clerk and Stenographer
Coxworthy, Gladys	Stenographer
Stevenson, Hugh	Inspector
Davids, Rupert	Stenographer
Cook, Mary Ann	Stenographer
Ramsden, Cecil H.	Clerk
Bull, Percy	Messenger
Bowles, Alex	Clerk
Jacobs, George	Clerk
Smith, William John	Superintendent
Galpine, Freda	Stenographer
Liddle, Mary Ethel	Stenographer
Boucher, William E.	Employment Scout
Clarke, Frederick C.	Clerk
Osborne, Violet I.	Stenographer
Davis, Mabel	Clerk
Ahlquist, Signe	Stenographer
Barron, Florence I.	Clerk and Stenographer
Spinks, Sarah	Clerk
Bogue, G. Lillian	Clerk
Thomson, Jean M.	Stenographer
Gillespie, J. C.	Superintendent
Matthews, Gladys	Assistant at Laboratory
McClure, A. D.	Assistant at Laboratory
Berry, Albert E.	Assistant Engineer, Experimental Station
Douglas, Dr. John S.	Assistant at Laboratory
Bolton, Alice J.	Assistant at Laboratory
McClenahan, Dr. R. R.	Assistant to Chief Officer of Health
Ward, Marion	Assistant at Laboratory

AND FISHERIES.—*Continued.*

Branch or Office.	Dates of Renewal.	Salary Under Last Certificate.
Sales Branch	Feb. 13, Oct. 5	$16 00 per week
	April 14, July 16, Oct. 6	16 00 per week.
Accountant's Office	Mar. 23, June 22, Sept. 24, Oct. 27	3 25 per diem.
Mount Pleasant Hatchery	Mar. 29,	90 00 per month.
	June 24, Sept. 24	16 00 per week.

OF LABOUR.

Branch or Office.	Dates of Renewal.	Salary Under Last Certificate.
Factory Inspection	Nov. 19, May 13	$1,000 00 per annum.
Ontario Government Public Employment Bureau, Chatham	Nov. 20, Feb. 18, May 18, Aug. 21	100 00 per month.
	Nov. 20, Feb. 18	90 00 per month.
	Nov. 22	16 00 per week.
Ontario Government Public Employment Bureau, Kingston	Nov. 22	1,400 00 per annum.
Provincial Board of Health	Nov. 1, Dec 3, June 1	4 00 per diem.
Provincial Board of Health	Nov. 18, Dec. 3, June 1	3 50 per diem.
Provincial Board of Health	Feb. 28, May 22	100 00 per month.
Ontario Government Public Employment Bureau, Toronto	Dec. 5, May 28	100 00 per month.
Boiler Inspection	Dec. 6, Feb. 28, May 26, Aug. 30	16 00 per week.
Provincial Board of Health	Feb. 16, Aug. 7	5 00 per diem.
Provincial Board of Health	Dec. 3, June 1	3 50 per diem.
Provincial Board of Health	Dec. 3, June 1	3 50 per diem.
Provincial Board of Health	Dec. 3, June 1	3 50 per diem.
Provincial Board of Health	Mar. 2, June 1	3 25 per diem.
Stationary and Hoisting Engineers	March 2	16 00 per week.
Stationary and Hoisting Engineers	Dec. 9, May 31	16 50 per week.
Stationary and Hoisting Engineers	Dec. 9, May 31	15 00 per week.
Factory Inspection	Dec. 10, March 9	1,900 00 per annum.
	June 21	1,200 00 per annum.
Factory Inspection	Dec. 17, Mar. 29, June 24	14 00 per week.
Ontario Government Public Employment Bureau, Toronto	Mar. 25,	27 00 per week.
	Dec. 19, June 24, Sept. 28	22 00 per week.
Ontario Government Public Employment Bureau, Toronto	Dec. 19, June 17	1,600 00 per annum
Ontario Government Public Employment Bureau, Toronto	Mar. 25, May 28, Aug. 3	25 00 per week.
Ontario Government Public Employment Bureau, Hamilton	June 22	125 00 per month.
	Dec. 30	15 00 per week.
	Dec. 30	14 00 per week.
Ontario Government Public Employment Bureau, Ottawa	Dec. 30, March 30	125 00 per month.
Ontario Government Public Employment Bureau, Toronto	Dec. 30, Mar. 30, July 9	1,400 00 per annum.
	March 30, June 30	15 00 per week.
Ontario Government Public Employment Bureau, Toronto	March 30, June 30	16 00 per week.
Ontario Government Public Employment Bureau, Toronto	Jan. 2, June 30	16 00 per week.
Factory Inspection	Jan. 3	14 00 per week.
	Jan. 3	14 00 per week.
Ontario Government Public Employment Bureau, Toronto	Jan. 3, July 2	75 00 per month.
Stationary and Hoisting Engineers	March 3, April 27	15 00 per week.
Ontario Government Public Employment Bureau, North Bay	Jan. 8, April 1, July 2	1,300 00 per annum.
Provincial Board of Health	Jan. 5, July 7	3 00 per diem.
Provincial Board of Health	Jan. 5, July 7	3 50 per diem.
Provincial Board of Health	Jan. 5	4 00 per diem.
Provincial Board of Health	Jan. 5	5 00 per diem.
Provincial Board of Health	Jan. 6	2 75 per diem.
Provincial Board of Health	Jan. 6	10 00 per diem.
Provincial Board of Health	Jan. 16, July 20	2 25 per diem.

DEPARTMENT OF

Name.	Position.
Taylor, Charles W	Clerk
Eakins, R. C.	Clerk
Duff, J. E.	Clerk
McDonald, Frances W. G	Assistant Investigator
Thoms, J. C.	Clerk
Guyatt, Dr. B. L.	Assistant to Chief Officer of Health
Pratt, Frederick G	Clerk
Ellis, A. H.	Superintendent
Magwood, Mary	Stenographer
Robertson, Hugh	Clerk
Strong, Margaret K	Special Investigator
Hotson, A. C. F.	Clerk
Knox, Beryl	Attendant, Tuberculosis Exhibit
Fraser, Myrtle S	Clerk
Coates, James	Clerk
Dey, James R	Inspector
Chambers, Charles C.	Clerk
Detweiler, Dr. H. K.	Laboratory Assistant
Porter, G. W.	Inspector
Stroud, William Alan	Superintendent
Wallace, Samuel A	Superintendent
Lane, Olive	Stenographer
Meredith, Vivian M	Clerk
Peacock, W. J.	Clerk
Ryan, David S.	Superintendent
Sumner, Evelyn S.	Stenographer
King, Charles W.	Clerk
Galpine, Freda	Stenographer
Magwood, Mary	Stenographer
McComb, Stella	Clerk
Cooper, Arthur James	Clerk
Johnson, James Robert	Clerk
Moseley, Charles	Assistant to Chairman
McDougall, Neil	Clerk
Waizman, Mary T.	Typist
Armstrong, Howard B	Clerk and Statistician
Rice, Leonard A.	Office Appliance Operator
Lucas, Edith H.	Stenographer
Albrough, Robert	Inspector
Taylor, Arthur William	Clerk
West, J. Pender	Factory Inspector and Examiner of Reports and Designs
Tompkins, Ethel	District Field Director
Fallows, Sidney, N	Clerk

LABOUR.—*Continued.*

Branch or Office.	Dates of Renewal	Salary under Last Certificate.
Ontario Government Public Employment Bureau, Toronto	Jan. 19, July 19	$1,600 00 per annum.
Ontario Government Public Employment Bureau, Toronto	Jan. 19, July 19	1,400 00 per annum.
Ontario Government Public Employment Bureau, Toronto	Jan. 19, April 21, May 19, Aug. 21	4 50 per diem.
	Jan. 19, March 22	3 50 per diem.
Ontario Government Public Employment Bureau, Ottawa	Jan. 19	100 00 per month.
Provincial Board of Health	May 13	10 00 per diem.
Ontario Government Public Employment Bureau, Toronto	April 17	125 00 per month.
Ontario Government Public Employment Bureau, St. Catharines	Jan. 20	1,300 00 per annum.
	Jan. 20	15 00 per week.
Ontario Government Public Employment Bureau, Peterborough	Jan. 29	100 00 per month.
	Jan. 29, July 23	1,600 00 per annum.
Ontario Government Public Employment Bureau, Toronto	Jan. 29, July 23	110 00 per month.
Provincial Board of Health	Jan. 30	100 00 per month.
Ontario Government Public Employment Bureau, Hamilton	Feb. 3, July 30	1000 00 per annum.
Ontario Government Public Employment Bureau, Hamilton	Feb. 4	90 00 per month.
Boiler Inspection	Feb. 18, May 18, Aug. 21	1,600 00 per annum.
Provincial Board of Health	Feb. 16, Aug. 10	3 50 per diem.
Provincial Board of Health	Feb. 16, Sept. 28	5 00 per diem.
Stationary and Hoisting Engineers	Feb. 18	1,700 00 per annum.
Ontario Government Public Employment Bureau, Kingston	Aug. 21	1,500 00 per annum.
Ontario Government Public Employment Bureau, St. Catharines	Aug. 21	1,500 00 per annum.
Factory Inspection	March 9, May 31, Sept. 1	15 00 per week.
Stationary and Hoisting Engineers	May 17	15 00 per week.
Ontario Government Public Employ- Bureau, St. Thomas	Feb. 28, Aug. 30	100 00 per month.
Ontario Government Public Employment Bureau, Timmins	Feb. 28	125 00 per month.
Provincial Board of Health	March 2	3 00 per diem.
Ontario Government Public Employment Bureau, Toronto	March 28, Aug. 30	100 00 per month.
Ontario Government Public Employment Bureau, Toronto	March 19	15 00 per week.
Ontario Government Public Employment Bureau, Toronto	March 19	15 00 per week.
Stationary and Hoisting Engineers	March 22	15 00 per week.
Ontario Government Public Employment Bureau, Windsor	March 22	27 00 per week.
Ontario Government Public Employment Bureau, Ottawa	March 22	125 00 per month.
Stationary and Hoisting Engineers	Mar. 22, Aug. 7	2,200 00 per annum.
Ontario Government Public Employment Bureau, Sault Ste. Marie	March 22	25 00 per week.
	April 26, June 23, Sept. 28	16 00 per week.
	March 23	25 00 per week.
Provincial Board of Health	June 1	14 00 per week.
Stationary and Hoisting Engineers	April 26	16 00 per week.
Factory Inspection	March 29, Sept. 24	125 00 per month.
Ontario Government Public Employment Bureau, Guelph	March 30	1300 00 per annum.
Factory Inspection	June 30	2,200 00 per annum.
Ontario Government Public Employment Bureau, Toronto	April 1	70 00 per month.
Ontario Government Public Employment Bureau, Toronto	July 2	100 00 per month.

DEPARTMENT OF

Name.	Position.
Martin, Mary	Clerk
White, Lillian M.	Stenographer
Brown, James M.	Assistant to Board
Dickie, Melrose H.	Superintendent
Johnston, E. Wilmot	Assistant Engineer
Burn, G. A. H.	Assistant Engineer
Ryan, T. J. L.	Assistant Engineer
Ure, Douglas J.	Assistant Engineer
Marriott, Dorothy	Clerk and Typist
Butterworth, Edmund	Assistant Engineer
Brown, Harold D.	Assistant Biologist
Roberts, D. M.	Stenographer
Dickie, Melrose H.	Clerk
McAlpine, Miss E. M.	Stenographer
Fraser, A. D. R.	Assistant Chemist, Experimental Station
Lucas, G. H. W.	Assistant Chemist and Bacteriologist, Experimental Station
Phillips, Miss M. L.	Switchboard Operator
Lott, W. H.	Superintendent
Wilcox, C. J.	Superintendent
Ball, Oliver B.	Assistant Engineer, Experimental Station
Lamond, A. E.	Clerk
Charlton, H. P.	Superintendent
Tew, Daisy	Clerk
Wood, A. C.	Clerk
Turner, Frank	Clerk
Partridge, Jessie	Stenographer
Lucas, Edith H.	Stenographer
Murphy, Florence E.	Junior Clerk Stenographer

DEPARTMENT OF

Fawcett, John A.	Messenger
Farrell, John	Special Immigration Agent
Moore, Jessie	Stenographer
Brownjohn, Minnie E.	Clerk
McGillivray, A. D.	Clerk
Mulholland, Samuel	Messenger
Ashley, Richard B.	Vault Caretaker
Bindon, F. W.	Clerk
Smith, Ernest E.	Clerk
Chambers, Bessie	Stenographer
Axford, W. T.	Messenger
McCort, Jean C.	Clerk and Stenographer
Lee, John T.	Clerk
Black, Robert N.	Clerk
Hastings, Mrs. Dorothy M.	Stenographer
Bassford, Vera M.	Stenographer
White, Dr. J. H.	In connection with Fire Ranging
Faull, Dr. J. H.	In connection with Plant Pathology
Johnston, R. M.	Forest Assistant

DEPARTMENT OF

McFarland, James F.	Messenger and Junior Clerk
Graham, G. E. H.	Files Clerk

LABOUR.—*Continued.*

Branch or Office.	Dates of Renewal.	Salary Under Last Certificate.
Ontario Government Public Employment, Bureau, Toronto	July 9	$16 00 per week.
Ontario Government Public Employment Bureau, St. Catharines	Oct. 14	13 00 per week.
Stationary and Hoisting Engineers	Oct. 14	2,200 00 per annum.
Ontario Government Public Employment Bureau, Welland	April 26	100 00 per month.
Provincial Board of Health	Aug. 9	4 50 per diem.
Provincial Board of Health	Aug. 9	4 50 per diem.
Provincial Board of Health	Aug. 9	4 50 per diem.
Provincial Board of Health	Aug. 9	4 00 per diem.
Factory Inspection	April 29	15 00 per week.
Provincial Board of Health	Aug. 9	3 50 per diem.
Provincial Board of Health	Aug. 9	4 50 per diem.
Boiler Inspection	May 5	17 30 per week.
Stationary and Hoisting Engineers	May 13	25 00 per week.
Ontario Government Public Employment Bureau, Toronto	Aug. 10	15 00 per week.
Provincial Board of Health	Aug. 9	4 00 per diem.
Provincial Board of Health	Aug. 9	4 50 per diem.
Ontario Government Public Employment Bureau, Toronto	Aug. 10	16 00 per week.
Ontario Government Public Employment Bureau, Sarnia	Aug. 10	1,400 00 per annum.
Ontario Government Public Employment Bureau, Oshawa	Aug. 1	1,400 00 per annum.
Provincial Board of Health	Aug. 9	4 00 per diem.
Ontario Government Public Employment Bureau, Timmins	Aug. 21	1,300 00 per annum.
Ontario Government Public Employment Bureau, Cobalt	Aug. 21	1,500 00 per annum.
Factory Inspection	Aug. 21	16 00 per week.
Ontario Government Public Employment Bureau, Port Arthur	Aug. 30	1,300 00 per annum.
Ontario Government Public Employment Bureau, Ottawa	Oct. 6	1,400 00 per annum.
Provincial Board of Health	Feb. 11, Aug. 7	2 75 per diem.
Provincial Board of Health	June 14, Sept. 1	18 00 per week.
Ontario Government Public Employment Bureau, Cobalt	October 21	14 00 per week.

LANDS AND FORESTS.

Minister's Office	Nov. 20, May 11	$12 00 per week.
Colonization	Nov. 22, Feb. 25	150 00 per month.
Colonization Roads	Nov. 28, March 2, Sept. 7	17 00 per week.
Accounts	Dec. 9, Feb. 10, Aug. 3, Sept. 29	2 50 per diem.
Colonization	Dec. 19	3 50 per diem.
Minister's Office	Jan. 5, July 7, Oct. 27	13 50 per week.
Crown Lands	Jan. 5, April 6, July 7, Oct. 2	3 50 per diem.
Lands	Jan. 8, April 13, July 9	5 00 per diem.
Lands	Jan. 22, April 23	4 00 per diem.
Woods and Forests	Jan. 24, April 21, July 19, Oct. 26	75 00 per month.
Colonization Roads	Feb. 4, May 7, Aug. 7	15 00 per week.
Woods and Forests	Feb. 26	18 00 per week.
Records	March 20, June 17, Sept. 22	25 00 per week.
Records	April 1, Sept. 30	18 00 per week.
Woods and Forests	June 5, Sept. 7	18 00 per week.
Forestry	Sept. 17	2 50 per diem.
Forestry	Sept. 13	250 00 per month.
Forestry	Sept. 13	250 00 per month.
Forestry	Oct. 27	150 00 per month.

MINES.

	Nov. 28, May 27, Aug. 24	$ 2 25 per diem.
	Dec. 30, March 23	1,200 00 per annum.

DEPARTMENT

Name.	Position.
Burn, B. D.	Natural Gas Inspector
Atchie, Barbara	Filing Clerk
Farrington, James	Private Secretary
White, Nora B.	Stenographer
Stewart, Robert	Office Boy
Watson, Charles	Draftsman
Boys, Edith R.	Stenographer
Field, Doris J.	Stenographer
Stuart, William O.	Office Boy
Bell, Mrs. E. C.	Clerk
Wallace, Winnifred	Stenographer
Johnston, J. E. A.	Clerk

DEPARTMENT OF THE

Chamberlain, Charles	Assistant Engineer, Experimental Station
Johnson, Charles H.	Clerk
Boyce, Nora I.	Clerk and Stenographer
Cambridge, Henry S.	Assistant in Laboratory
Blea, William	Clerk
Puncheon, Ralph	Clerk
Wood, Sydney	Clerk
George, Charles H.	Clerk
Port, Frances M.	Clerk
Foster, Grace M. I.	Filing Clerk
Henry, Lillie	Clerk
Hoolihan, J. J.	Secretary to Director
Law, Jack	Messenger
Rooney, Ethel M.	Stenographer
Abernethy, Mabel	Stenographer
Arthurs, William	Clerk
Stout, Mrs. Florence	Clerk
Markle Gladys	Clerk
Hooper, A. A.	Clerk
Hill, Arthur	Clerk
Mitchell, Arthur	Clerk
MacLeod, Kathleen	Clerk
Adams, Samuel	Clerk
Govan, James	Architect
Weber, Mabel	Stenographer
Strachan, Neil	Clerk
McBain, Rachael	Clerk and Stenographer
Smith, Ralph Lytton	Clerk
Oldfield, Albert	Clerk
Partridge, Jessie E.	Clerk
Kirby, Vera M.	Clerk
Greer, Lillian	Clerk
Griffiths, Allan James	Draftsman
Bowman, Mrs. Annie	Clerk
Rattray, Alfred	Clerk of Works
Montgomery, Ray	Files Clerk and Stenographer
Butterfield, Percy F.	Surveyor
Williams, George N.	Chief Draftsman
Martin, Laura	Clerk
Rumble, Mary	Stenographer
Hally, Dorothy	Stenographer
Secor, Christine E.	Clerk
Puley, P. M.	Clerk
Becker, Alyda	Stenographer
Lowe, Stanley E.	Filing Clerk
Allan, Marion I.	Clerk
Nicholson, F. M.	Clerk
Till, Phillips McKay	Office Boy
Morrison, Gordon L.	Office Boy
Bradley, Irene H.	Stenographer
Benness, Dorothy	Clerk

OF MINES.—*Continued.*

Branch or Office.	Dates of Renewal.	Salary Under Last Certificate.
	Dec. 30	$125 00 per month.
	Dec. 31	2 50 per diem.
	July 15, Oct. 17	1,600 00 per annum
Mining Commissioner	Jan. 15	17 00 per week.
Provincial Assay	April 14, July 9, Oct. 7	11 00 per week.
Mining Recorder's Office	July 30	1,800 00 per annum
Mining Commissioner	May 14, Aug. 7	3 00 per diem.
	June 25, Sept. 17	2 50 per diem.
	Aug. 7	10 50 per week.
	Aug. 7	16 00 per week.
Mining Commissioner	May 29, Aug. 3, Sept. 7,	17 00 per week.
	Aug. 13	30 00 per week.

PROVINCIAL SECRETARY.

Branch or Office.	Dates of Renewal.	Salary Under Last Certificate.
Provincial Board of Health	Nov. 1	$3 25 per diem.
Registrar General	Nov. 8, Jan 26, July 19	3 50 per diem.
Registrar General	Nov. 8, Feb. 10, Aug. 11	16 00 per week.
Provincial Board of Health	Nov. 18	3 00 per diem.
Inspection Public Institutions	Nov. 20	4 00 per diem.
Registrar General	Nov. 21, Feb. 17	3 50 per diem.
Registrar General	Nov. 21	3 50 per diem.
Registrar General	Nov. 21, Feb. 17. Aug. 18	3 50 per diem.
Registrar General	Nov 21, Feb. 21. Aug. 18	16 00 per week.
Registrar General	Nov. 22, Feb. 23. Aug. 18	16 00 per week.
Registrar General	Nov. 22, Feb. 21. Aug. 18	16 00 per week.
Bureau of Municipal Affairs	Nov. 27, May 27	150 00 per month.
Assistant Provincial Secretary	Nov. 27, May 29	12 00 per week.
Assistant Provincial Secretary	Nov. 27, May 29	14 00 per week.
Assistant Provincial Secretary	Nov. 27, May 29	14 00 per week.
Registrar General	Nov. 28, March 2, Sept. 7	3 50 per diem.
Registrar General	Nov. 28, March 1	16 00 per week.
Registrar General	Nov. 28, March 2	16 00 per week.
Registrar General	Dec. 1, March 2, Sept. 7	3 00 per diem.
Registrar General	Dec. 2, March 2	3 50 per diem.
Registrar General	Dec. 2 March 2	3 50 per diem.
Registrar General	Dec. 5, March 12, Sept. 7	16 00 per week.
Registrar General	Dec. 5, March 12	100 00 per month.
Inspection Public Institutions	Dec. 6	8 95 per diem.
Inspection Public Institutions	Dec. 10	16 50 per week.
Deputy Registrar	Dec. 10, June 10	1,000 00 per annum
Assistant Provincial Secretary	March 12, June 16	83 33⅓ per month.
Bureau of Municipal Affairs	Dec. 15, June 18, Aug. 20	112 50 per month.
Housing Branch	Dec. 15	133 33⅓ per month.
Registrar General	Dec. 15	2 50 per diem.
Registrar General	Dec. 15, June 14	16 00 per week.
Registrar General	Dec. 15, June 14	16 00 per week.
Architect's Office	Dec. 19, June 18	100 00 per month.
Registrar General	Dec. 19, March 19	16 00 per week.
Architect's Office	Dec. 19, June 14	1,800 00 per annum.
Minister's Office	Dec. 19, March 20	75 00 per month.
Architect's Office	Dec. 19, June 14	1,350 00 per annum.
Architect's Office	Dec. 19	1,900 00 per annum.
Registrar General	Dec. 23	16 00 per week.
Registrar General	Dec. 23, June 15	16 00 per week.
Registrar General	Dec. 23, June 15	16 00 per week.
Registrar General	Dec. 23, June 15	16 00 per week.
Inspection Public Institutions	December 30, July 2	27 00 per week.
Housing Branch	Dec. 30, June 29	15 00 per week.
Assistant Provincial Secretary	Jan. 6	11 00 per week.
Registrar General	Jan. 10, July 12	16 00 per week.
Inspection Public Institutions	Jan. 13, July 27	1,800 00 per annum.
Inspection Public Institutions	Jan. 14, July 27	12 00 per week.
Inspection Public Institutions	January 14, July 27	10 00 per week.
Assistant Provincial Secretary	May 3	14 00 per week.
Registrar General	Jan. 15, July 16	16 00 per week.

DEPARTMENT OF THE

Name.	Position.
Portch, Hazel M	Stenographer
Griffin, Lillian	Clerk
McNab, Adeline	Clerk
McDonald, Lillian J	Clerk
McJannett, W. J	Electrical Engineer
Campbell, Della	Stenographer
Livett, William B	Clerk
Bellinger, Theodore	Clerk
Sharp, John Park	Clerk
Foster, Roland	Architectural Draftsman
Taber, F. B	License Inspector
Topping, Nathaniel	Typist
Barron, George	Superintending Plumber
White, May	Clerk
Bray, Irene H	Stenographer
Saunders, Amy	Stenographer
Robertson, John	Clerk
McIntyre, Malcolm	Clerk and Stenographer
Fullerton, Frances E	Stenographer
Morley, Emily C	Clerk and Stenographer
Kynnersley, Albert E	Clerk
Vance, Samuel	Junior Draftsman
Thompson, John	Clerk
Scott, Sadie	Clerk and Stenographer
Isbister, William	Mechanical Engineer
DeHaitre, Arthur	Provincial Officer
Stick, Frank	Provincial Officer
Butt, Edna L	Stenographer
Shaw, J. Morgan	Special Investigator
Boyd, Effie B	Stenographer
Simpson, Frank	Clerk and Messenger
Edmunds, Irene	Clerk and Stenographer
Beck, Nona	Stenographer
Moore, J. Howard	Multigraph Operator
Stewart, Christine I	Stenographer
McCready, William	Provincial Officer
Spracklin, Rev. J. O. L	Provincial Officer
Mulhall, John F	Provincial Officer
Silvester, David	Provincial Officer
Down, George	Provincial Officer
Butt, Edna L	Junior Clerk Stenographer

DEPARTMENT OF

Name.	Position.
Nicol, A. C. B	Draftsman
Wood, Sidney	Clerk
Wallace, Winnifred	Stenographer
Colville, Alex. B	Storekeeper
Gillis, Doris B	Stenographer
Kellough, Mary C	Stenographer
Grant, Andrew	Architectural Draftsman
Kennedy, Martin	Assistant Draftsman
Blyth, Alex	Draftsman
McLean, Duncan	Clerk
Bizer, Essie A	Assistant Telegraph Operator
Smith, Agnes C	Clerk
Hodges, Claude Vivian	Draftsman
Roberts, R. J	Assistant

PROVINCIAL SECRETARY.—*Continued.*

Branch or Office.	Dates of Renewal.	Salary Under Last Certificate.
Registrar General	Jan. 15, July 12	$16 00 per week.
Registrar General	Jan. 15	16 00 per week.
Registrar General	Jan. 16, July 12	16 00 per week.
Registrar General	Jan. 19, July 19	16 00 per week.
Inspection Public Institutions	Jan. 23, July 27	1,800 00 per annum.
Assistant Provincial Secretary	Jan. 24	18 00 per week.
Assistant Provincial Secretary	Jan. 24, April 27, July 23, Sept. 29	90 00 per month.
Housing Branch	Jan. 27, July 27	28 00 per week.
Housing Branch	January 27, July 27	28 00 per week.
Housing Branch	January 31, May 3	125 00 per month.
Board of License Commissioners for Ontario	Feb. 6	1,800 00 per annum.
Inspection Public Institutions	Feb. 11, Sept. 1	15 00 per week.
Inspection Public Institutions	Feb. 11	1,700 00 per annum.
Registrar General	Feb. 19, June 14	16 00 per week.
Inspection Public Institutions	April 27, October 22	75 00 per month.
Inspection Public Institutions	May 28	16 00 per week.
Deputy Registrar's Office	March 2, Aug. 25	80 00 per month.
Minister's Office	March 8, Aug. 25	18 00 per week.
Housing Branch	March 17	15 00 per week.
Inspection Public Institutions	March 18	15 00 per week.
Assistant Provincial Secretary	June 22, Sept. 28	3 50 per diem.
Inspection Public Institutions	March 29, October 11	18 00 per week.
Inspection Public Institutions	March 30	25 00 per week.
Inspection PublicInsstitutions	March 20	15 00 per week.
Inspection Public Institutions	April 13, July 27	125 00 per month.
Board of Licencse Commissioners for Ontario	July 12, Oct. 12	125 00 per month.
Board of License Commissioners for Ontario	July 12, Oct. 12	125 00 per month.
Housing Branch	April 27	15 00 per week.
Inspection Public Institutions	April 27	1,800 00 per annum.
Assistant Provincial Secretary	July 27	16 00 per week.
Board of License Commissioners for Ontario	Aug. 16	12 00 per week.
Assistant Provincial Secretary	Aug. 16	18 00 per week.
Neglected Children	June 9, Sept. 2	16 00 per week.
Inspection Public Institutions	Oct. 22	15 00 per week.
Inspection Public Institutions	Oct. 22	18 00 per week.
Board of License Commissioners for Ontario	Oct. 12	125 00 per month.
Board of License Commissioners for Ontario	Oct. 12	175 00 per month.
Board of License Commissioners for Ontario	Oct. 12	150 00 per month.
Board of License Commissioners for Ontario	Oct. 25	125 00 per month.
Board of License Commissioners for Ontario	Oct. 2	125 00 per month.
Registrar General	Oct. 27	15 00 per week.

PUBLIC WORKS.

Architect's Office	Nov. 8, Feb. 2, May 5	$6 00 per diem.
Architect's Office	Dec. 13, June 19, Aug. 13	100 00 per month.
	Feb. 3, Feb. 25	15 00 per week.
Ontario Hospital, Whitby	Feb. 2, Aug. 9	100 00 per month.
Architect's Office	Feb. 5, Aug. 13	2 75 per diem.
	Feb. 17, Aug. 13, Oct. 21	75 00 per month
Architect's Office	Feb. 25	150 00 per month.
Architect's Office	Feb. 25	4 00 per diem.
Architect's Office	Feb. 25, Aug. 30	5 00 per diem.
Architect's Office	March 26, Sept. 29	28 00 per week.
Telegraph Operator	April 8	2 75 per diem.
Accountant	April 8, July 9	3 00 per diem.
Architect's Office	April 27, Oct. 30	175 00 per month.
Architect's Office	April 27	4 00 per diem.

DEPARTMENT OF

Name.	Position.
Allen, Harold E.	Chauffeur
Heinonen, Jean E.	Stenographer
Sexsmith, Edith M.	Assistant to Telegraph Operator

DEPARTMENT OF

Name.	Position.
Cosby, N. W.	Clerk
Hainsworth, Norman	Clerk
Parker, Albert H.	Assistant Engineer
Ledingham, John	Draftsman
Foster, Roland	Draftsman
Fox, Edgar D.	Clerk
Huyck, Dorothy	Clerk and Stenographer
Watts, H. A.	Multigraph Operator
Packer, Arthur E.	Clerk
Rance, Charles C.	Assistant Engineer
Beemer, Helen M.	Clerk and Stenographer
Hallett, Norman W.	Clerk
Zoller, John L.	Clerk
Martin, Frank J.	Clerk
Grant, John A.	Special Constable
Carson, Marjory	Clerk and Stenographer
Timpany, Christine	Stenographer
Jones, L. E.	Assistant Engineer
Barclay, D.	Draftsman
Howard, Muriel	Clerk and Stenographer
Dickson, H. R.	Clerk
Starr, Mrs. Ellen E.	Clerk and Stenographer
Crabtree, H. S.	Draftsman
Cassidy, John F.	Draftsman
Crealock, Archie B.	Draftsman
Van Raalte, Phillip S.	Draftsman
Love, L. V.	Machinery Inspector
Smith, Archibald	Clerk and Bookkeeper
Spackman, Amy E.	Typist
Blueman, Lucille	Clerk and Stenographer
Anderson, C. H.	Property Valuator
Cannon, Dorothy	Typist
Colwell, Alfred T.	Chauffeur
Tamblyn, Clara	Filing Clerk
Lindsay, Kathleen	Clerk
Kemp, Mrs. Elva	Clerk and Stenographer
Warney, Marguerite	Clerk
Teddiman, William R.	Clerk
Hay, Adam	Draftsman
Hill, Helen	Junior Clerk Stenographer
Murray, Bessie	Clerk and Stenographer
Callaghan, Miss G. V.	Clerk and Stenographer
Moffit, Elsie R.	Stenographer
Walden, Inez A.	Stenographer
Brinkman, Francis L.	Assistant Engineer
Jacobs, Viola L.	Typist
Parker, Mrs. Winnifred G.	Typist
Fellowes, A. N.	Assistant Engineer
Garling, C. H.	Clerk
Anderson, William A.	Clerk
Cornell, C. W.	Assistant Engineer
Allen, William T.	Clerk
Reid, E. K.	Stenographer
MacLennan, Roderick	Resident Highway Engineer
Empey, John M.	Resident Highway Engineer
Baldwin, A. L.	Resident Highway Engineer
Macpherson, H. E.	Resident Highway Engineer
Nicholls, Mrs. Helen	Clerk
Manning, Jessie MacI.	Typist
Fellowes, A. N.	Resident Highway Engineer
Woolcock, Harold	Clerk

PUBLIC WORKS.—*Continued.*

Branch or Office.	Dates of Renewal	Salary under Last Certificate.
	April 29	$23 00 per week.
	Oct. 9	20 00 per week.
Telegraph Operator	Sept. 30	16 00 per week.

PUBLIC HIGHWAYS.

Branch or Office.	Dates of Renewal	Salary under Last Certificate.
	Nov. 19, May 27, July 30	$27 00 per week.
	Nov. 22, May 21, Aug. 18	80 00 per month.
	Nov. 22, May 5	200 00 per month.
	Nov. 22, May 21, Aug. 18	125 00 per month.
	Dec. 4	100 00 per month.
	Dec. 4	100 00 per month.
	Dec. 4, June 10, July 30	18 00 per week.
	Dec. 12	16 50 per week.
	Dec. 12	100 00 per month.
	Dec. 12	125 00 per month.
	Dec. 12, June 9, July 30	18 00 per week.
	Dec. 12	95 00 per month.
Motor Vehicles	Dec. 12	100 00 per month.
	Dec. 16, July 7	25 00 per week.
Motor Vehicles	Dec. 19, July 8	6 00 per diem.
	Jan. 6, July 6	16 00 per week.
	March 25, July 7	15 00 per week.
	Jan. 6, May 6, July 15	200 00 per month.
	Jan. 6, July 7	125 00 per month.
Motor Vehicles	Jan. 10, July 15	15 00 per week.
	April 12, July 15	100 00 per month.
Motor Vehicles	Jan. 16, July 15	2 80 per diem.
	Jan. 16, July 15	125 00 per month.
	Jan. 16	125 00 per month.
	Jan. 16, July 15	125 00 per month.
	Jan. 16, July 15	125 00 per month.
	Jan. 16, April 13	150 00 per month.
	Jan. 16, July 15	25 00 per week.
Motor Vehicles	June 22	15 00 per week.
Motor Vehicles	May 5, July 30	16 00 per week.
	Feb. 9, Aug. 17	200 00 per month.
Motor Vehicles	May 6, July 30	15 00 per week.
	Feb. 9, April 13, June 15	24 00 per week.
Motor Vehicles	February 19, Aug. 18	15 00 per week.
	Feb. 19, Aug. 18	15 00 per week.
	Feb. 23, Aug. 18	17 00 per week.
Motor Vehicles	Feb. 23, Aug. 18	14 50 per week.
	Feb. 24, Aug. 18	100 00 per month.
	March 23	125 00 per month.
	March 24	13 50 per week.
	March 25, July 8, Oct. 29	15 00 per week.
	March 26	15 00 per week.
	July 7	16 00 per week.
Motor Vehicles	July 8	15 00 per week.
	April 12	150 00 per month.
Motor Vehicles	July 8	15 00 per week.
Motor Vehicles	July 15	16 00 per week.
	April 14	150 00 per month.
	July 16	100 00 per month.
	July 28	21 00 per week.
	April 30	175 00 per month.
Motor Vehicles	April 30, July 30	3 50 per diem.
	July 30	16 00 per week.
	May 6, Oct. 29	200 00 per month.
	May 6	200 00 per month.
	May 6	200 00 per month.
	May 6, Oct. 29	200 00 per month.
Motor Vehicles	July 30	16 00 per week.
Motor Vehicles	May 20	16 00 per week.
	June 9	200 00 per month.
	Sept. 11	25 00 per week.

DEPARTMENT OF

Name.	Position.
Markle, Olive B.	Typist
Arnold, William	Clerk
Brinkman, F. L.	Resident Highway Engineer
Annis, Louis Wilma	Typist
Bush, Clayton E.	Resident Highway Engineer
Wright, George W. A.	Inspecting Engineer
Toon, Edna N.	Cheque Writer
Morley, Emily C.	Clerk and Stenographer
Murphy, Agnes Helene	Stenographer
Shortt, Geraldine G.	Stenographer
Reddin, Mary A.	Stenographer
Foster, Roland	Draftsman
Porter, Frank	Clerk
Boyce, Norah I.	Junior Clerk Typist

DEPARTMENT OF

Woodburn, Edward	Assistant Inspector
Lee, Roy E.	Messenger
Noonan, Melville	Messenger
Watson, F. M.	Clerk
Sheriff, Bonamy	Messenger
Magill, George	Clerk
Canning, Maude	Clerk and Stenographer
Boal, H. R.	Inspector
Burtt, Gordon E.	Clerk
Finnerty, Anna M.	Clerk and Stenographer
Grant, MacLean	Clerk
Silverthorne, J. M.	Clerk
Beattie, Allan M.	Clerk
Cassels, Caroline	Member
Whelan, Agnes	Clerk
Barthel, Verna C.	Stenographer
Ronan, Edward I.	Clerk
Smith, George A.	Field Man
Rice, Morley B.	Inspector
Severn, F.	Clerk
Maguire, James	Messenger
Shanahan, J. J.	Fire Investigator
Brazill, R. F.	Clerk
Wilson, Robert	Messenger
McNamara, Anthony	Clerk and Messenger
McVetie, Charles	Clerk
Frame, Christena E.	Stenographer
King, Olga A.	Clerk
Leonard, J. H.	Inspector
Maher, Aubrey T.	Clerk
Mogan, Gertrude	Stenographer
Allen, Leta	Stenographer
Robinson, Napier	Clerk
Murphy, Mrs. Mona	Clerk
Rouselle, Eleza	Stenographer
Macdonald, J. A.	Clerk
Coles, Florence E.	Stenographer
Blake, Harry M.	Film Editor
Rose, Harry	Amusements Tax Inspector
Gibbons, R. G.	Amusements Tax Inspector
McKay, William R. B.	Amusements Tax Inspector
MacLeod, Norman	Assistant Operator
Coulter, John	Clerk
Mitchell, James C.	Clerk and Messenger
Puncheon, Ralph	Amusements Tax Inspector
Nevin, W. A.	Amusements Tax Inspector
Sheridan, E. J.	Amusements Tax Inspector
Hill, Arthur	Amusements Tax Inspector
Malloy, Jean Gladys	Clerk Stenographer
Affleck, Nora M.	Junior Clerk Stenographer
Frame, Georgina	Junior Clerk Stenographer

PUBLIC HIGHWAYS.—*Continued.*

Branch or Office.	Dates of Renewals.	Salary Under Last Certificate.
	Aug. 18	$16 00 per week.
Motor Vehicles	Sept. 10	21 00 per week.
	June 21	200 00 per month.
	Oct. 29	15 00 per week.
	July 9	200 00 per month.
	Oct. 29	200 00 per month.
	Oct. 29	16 00 per week.
	July 19, Oct. 29	17 00 per week.
	Oct. 29	16 00 per week.
	Oct. 29	16 00 per week.
	Aug. 19	18 00 per week.
	Sept. 2	125 00 per month.
	Sept. 15	22 50 per week.
	Oct. 20	16 00 per week.

THE TREASURER.

Branch or Office.	Dates of Renewals.	Salary Under Last Certificate.
Inspector of Moving Picture Theatres.	Nov. 1, Feb. 9, April 17	$25 00 per week.
	Nov. 1, Dec. 15, June 16, Aug. 17.	2 50 per diem.
King's Printer's	Nov. 1, Feb. 9	2 00 per diem.
Treasury	Nov. 1, Feb. 10, May 8, July 28	4 00 per diem.
	Nov. 1, Dec. 15, June 14	2 50 per diem.
Treasury	Nov. 8, Feb. 9, May 8, Aug. 17	3 75 per diem.
Board of Censors of Moving Pictures	Nov. 19, Jan. 22, May 21, July 19.	16 00 per week.
Inspector of Moving Picture Theatres	Nov. 28, Jan. 16, July 19	27 00 per week.
Inspector of Moving Picture Theatres	Nov. 28, Jan. 30, May 21, July 23.	27 00 per week.
Solicitor to the Treasury	Dec. 1, Feb. 25	16 50 per week.
Post Office	Dec. 12, June 14, Sept. 14	75 00 per month
Archives	Dec. 18, June 14	2 50 per diem.
Provincial Motion Picture Bureau	Dec. 30, March 27, June 30	80 00 per month.
Board of Censors of Moving Pictures	Dec. 31	25 00 per week.
King's Printer's	Dec. 31, Feb. 6, Mar. 5	20 00 per week.
Minister's Office	April 1, July 3	15 00 per week.
Taxation	Jan. 8	28 00 per week.
Provincial Motion Picture Bureau	Jan. 8	150 00 per month.
Taxation	Jan. 16, April 19	25 00 per week.
Provincial Motion Picture Bureau	Jan. 20, April 14, July 21, Aug. 19	25 00 per week.
	April 16, July 22, Oct. 20	11 00 per week.
Fire Marshal	July 22	2200 00 per annum.
Provincial Motion Picture Bureau	Feb. 10	25 00 per week.
Taxation	Feb. 11, Aug. 17	9 00 per week.
Solicitor to the Treasury	Feb. 24	12 00 per week.
Succession Duty	Feb. 24, May 27, Sept. 1	$5 00 per diem.
Fire Marshal	May 27	15 00 per week.
Inspector of Moving Picture Theatres	Feb. 26	15 00 per week.
Inspector of Moving Picture Theatres	March 4	125 00 per month.
Succession Duty	March 8	5 00 per diem.
Provincial Motion Picture Bureau	March 18	15 00 per week.
Succession Duty	March 18	15 00 per week.
Library	March 25, Sept. 27, Oct. 30	3 75 per diem.
Board of Censors of Moving Pictures	March 27	16 00 per week.
Inspector of Moving Picture Theatres	March 27	16 00 per week.
Archives	March 27, Sept. 27	4 00 per diem.
Solicitor to the Treasury	March 30	75 00 per month
Provincial Motion Picture Bureau	Oct. 1	1600 00 per annum
Taxation	July 7, Oct. 12	25 00 per week
Taxation	July 7, Oct. 12	25 00 per week.
Taxation	July 7, Oct. 12	25 00 per week.
Board of Censors of Moving Pictures	April 30	27 00 per week.
King's Printer's	June 30, July 28	3 00 per diem.
Succession Duty	July 28	12 00 per week.
Taxation	June 25, Sept. 17	25 00 per week.
Taxation	Sept. 17	25 00 per week.
Taxation	Oct. 1	25 00 per week.
Taxation	July 2, Oct. 1	25 00 per week.
	Oct. 20	18 00 per week.
Fire Marshal	Sept. 9, Oct. 14	15 00 per week.
Fire Marshal	Oct. 14	16 00 per week.

AUDIT

Name.	Position.
Dignam, James H.	Clerk
Harris, Charles F.	Clerk
Woods, Edwin A.	Messenger and Junior Clerk
Milne, James	Clerk
Geddes, William A.	Clerk
Lee, Howard	Clerk
Scott, John	Clerk
Watson, Charles V.	Clerk
Chater, H. J.	Clerk

OFFICE.

Branch or Office.	Dates of Renewal.	Salary Under Last Certificate.
	Nov. 28, May 27	$4 00 per diem.
	Jan. 24, July 22	26 00 per week.
	Feb. 18, July 28	2 50 per diem.
	Feb. 25	25 00 per week.
	Feb. 25	27 00 per week.
	March 8	3 75 per diem.
	March 13	3 75 per diem.
	March 27	3 75 per diem.
	March 27	3 33 ⅓ per diem

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